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Psychologic Facts and Dietary Fancies[1]

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THE INTEREST in food which the professional dietitian has differs from that of most other people in that she is concerned with what they eat and what the practical results are of their choices. Most people in our society—and by far most people of other societies—are not nearly as interested in what or why they eat as they are in how they feel about their food. Since eating is not only universal but also an endless activity, and since it is so closely related to one's private likes, dislikes, and tastes, the range of attitudes about food is tremendously wide and complex. Everyone has "his taste," and from infancy until death he concerns himself with seeking and enjoying the kinds of foods that are most pleasurable to him.

No more vivid documentation of this need be shown than the frequency and naturalness with which we use our eating sensations to categorize and describe other experiences. We speak of "taste" in many areas, of flavors to describe people and situations—spicy, flat, sour, sweet, delectable, and so on. We speak of sensations associated with food—of coolness, bland, tart, smooth as cream, an oily personality, and so on. The attitudes aroused by food represent basic standards of experience, and they help us define many experiences we have in areas totally removed from eating.

In this paper, we are not so much concerned with the attitudes about food which people carry into other areas of life, as we are with the attitudes which they have about foods themselves, and how these are acquired and how they influence dietary behavior. These questions are of primary importance to the dietitian, who would presumably find it an achievable task to outline perfect diets for many situations, were it not that the patient's attitudes about food interfere.

FOOD AS A SYMBOL

In our society, food stands for very many things besides survival and fuel for the body. We live in a world with an abundance of food, and its meanings are more important to most people than its presence. Thus, the stimulation of *appetite* is not sufficient to induce eating when personal feelings or needs contradict the food offered. Let us take some examples:

> The family of a little girl, two, went away on a trip and left her with a friendly woman the child knew only fairly well. While they were gone, the little girl fell and twisted her shoulder, with some resulting pain for two or three days. In that time, the child refused practically all food offered her, *except* breakfast and cookies. She begged for beer, until the motherly woman finally gave her a few sips from time to time.

No explanation on a physiologic basis will suffice for this situation—nor is it needed. Breakfast and cookies were probably reinforced by hunger and were, in addition, foods this child loved in and of themselves. The *beer* she wanted because her daddy drank a bottle of beer when he came home in the evening, or when he read—and at these times, he held her on his lap, cuddled, and comforted her. He could make her hurt go away, and she sought this symbol of him when his absence coincided with her pain.

> Soldiers who had been tried beyond their limits in combat frequently develop gastrointestinal symptoms—and a craving for milk is common among these casualties. Soldiers in general show some heightening in their interest in, and desire for, milk.

Again, physiologic motives seem to be the servant rather than the master of behavior. The craving for milk could clearly be seen in many severe cases to be related to the *meanings* of milk, rather than to its nutritional value or use. The unhappy, suffering, far-from-home-and-loved-ones soldier looks back to *milk* as in many ways expressing the comfort, security, and contentedness of life as it was at home. Drinking it brings back these memories and hopes more vividly and gives him a kind of comfort that is totally unrelated to calcium content or even liquid form.

This same phenomenon is, of course, often observed with adults suffering from anorexia nervosa, and with children who are not yet distorted in their personalities. Probably to all of us, reared in a world valuing and providing milk for children, it has some of these meanings. To those of us who don't like the security and would rather get on about our busy independent lives, milk may be unpleasant—just

[1] Presented before the Illinois Dietetic Association in Chicago, on February 29, 1952.

because it means home, mother, and irresponsible security.

For some four years, the author's organization has been studying food habits, preferences, and attitudes.[2] We have concerned ourselves with how these are acquired, what they mean in many areas—shopping, cooking, collecting and trying recipes, feeding husbands and children, looking at and responding to advertisements. In doing so, we have learned a great deal about what Americans think about food, and how and why they use it.

REASONS FOR LAY ATTITUDES

Their attitudes vary from those of the professional dietitian for a number of reasons. First, the dietitian's spring from scientific concepts of the body, of metabolism, and of nutrition. She not only knows that certain "acid-tasting" foods form base solutions and products; she also knows what that means. Her patients and clients may know the fact; it is extremely unlikely that they know its implications. The dietitian knows why frankfurters are less desirable for a baby than is beef, but to many Americans, they are both meat and that pretty much settles that. If they think about the difference, it is likely to be explained that frankfurters often have "other" things besides meat in them. The public's concept of the body, of what it does with food, and how, is extremely simple and misinformed.

Second, the dietitian's profession dedicates her to a pervasive goal of efficiency. Some of the problems she faces are: how to eat better on less money, how to balance dietary intake with metabolic requirements, how to provide materials for growth or recovery, and how to avoid metabolic processes that are dangerous or undesirable. The average person does not worry much with such questions; he is interested in his pleasure and is quick to say of foods that make him sick (or sicker), "They don't like me." This different interest is so widespread and so consistent with the emotional meaning of food that the psychologist (as well as the dietitian and the physician) knows she is dealing with a *sick personality* when she finds a nonprofessional woman who is intensely concerned with the wholesomeness, digestibility, roughage, or purity of food.

This is not to say that such a lay person has *no* interest in anything except the pleasure-value and emotional meanings of her diet. She does have some awareness of its functional value, and many people believe that she should have more. There is little question, however, that she is healthy in placing the gratifications of food ahead of its physiologic impact, and in not showing a perspective like that of the professional dietitian at work.

Third, the average patient or client whom the dietitian sees comes from a world with somewhat different values and standards than hers. As professionals, dietitians have joined the ranks of the sophisticated and enlightened public—and there is a great deal more distance between what you believe and what Mrs. Housewife believes than you could guess from looking at clothing and income. You are members of, or are becoming members of, the "upper middle class" and are consequently stimulated and encouraged to develop tastes and habits which are relatively scarce among the average industrial, rural, and clerical families of America.

Let us briefly consider five of these differences, which relate to dietary preferences.

THE UPPER MIDDLE CLASS

First, the professional and highly educated person has a broader outlook on life. She not only has been taught more about other countries, other customs, other views, she has also been taught to take these into account and to look at them as potentially useful to her. Thus, she will experiment with new foods, keep an open mind about them, and really "try them out" before deciding whether or not they are good, pleasant, or worth while. She is more cognizant of variety and more accepting of the idea that something quite familiar may be actually less desirable than something new. The average person does not have this view of life. Rather, she is taught to hold fast to the familiar, to get along as her parents and friends do, to stick to a sure thing rather than try to accept what is done by strangers and odd people on other corners of the earth.

Second, the upper middle class woman is not held so closely to food preparation as part of her duties. True, it is accepted in the great majority of American homes that the housewife will buy, prepare, and serve food herself, but this obligation is viewed somewhat more flexibly in the upper middle class home than it is in the average household. It is quite acceptable—indeed desirable—for the woman to have a maid, for her to chuck the whole business sometimes and eat out, for her to arrange various ways of avoiding cooking when she does not *want* to cook.

This is not so in the mass market household. This you can easily see if you consider the scarcity of good restaurants in small towns that have only a few upper middle class families; there are not enough people eating out to support high-quality food, cooks, or managers. In the mass market home, the housewife's obligation to prepare food is a very serious and relatively unbreakable one; she must have good reason for not carrying out this central function.

Third, the upper middle class woman's interest in food tends to be broader and more "light-hearted" because the people she feeds approve and encourage her to develop individuality and difference. She is not taught to believe that she should cook just as her mother does; it does not arouse unfavorable

[2] Largely under the sponsorship of Gardner Advertising Company, St. Louis.

comment among her family or friends if she serves them something they never had before, or if something new doesn't work out as she hoped.

In the more average home, the values tend in the reverse direction. The housewife is encouraged to be *like* her friends and family; if her food preferences are very different from theirs, it will not bring her praise; if something new fails, she is likely to be informed that she should have stuck to what she knew and not risked ruining a meal. This situation is one which you face whenever you try to persuade a mother to install radical changes in her or her family's diet—for any reason at all. She doesn't want to face their censure, and she may not carry out your suggestions because of this possibility.

Fourth, the upper middle class woman is also encouraged to be self-indulgent to a greater extent than the average woman, who is coaxed, ordered, and admonished to put her family eternally ahead of herself. This means, in terms of food habits, that the upper middle class woman has a wider margin of safety in running counter to the tastes of her friends and family—that she can prepare foods in unusual ways without being marked as uncooperative, unfriendly, or insensitive.

Fifth, aesthetic values are emphasized in the upper middle class home more than they are in the average home. The *appealing appearance* of food is very important when people are not "hungry enough to chew the table," as they very often aren't in the sedentary occupations and controlled play of the upper middle class. Furthermore, the housewife's aesthetic pride itself is likely to extend over the entire meal, whereas in the average home it clings to desserts, party foods, and festive boards.

PROFESSIONAL INTERESTS

Finally, the professional dietitian has a different perspective on diet and dietary habits because it is part of her professional status to improve and change the behavior of others. Just as the physician is dedicated to better health, the psychologist to greater human understanding, the dietitian is, by virtue of her occupation, oriented toward improving the taste and eating of America. It is not necessary to point out that her public does not share her enthusiasm or sense of responsibility in this area.

EARLY EXPERIENCES DETERMINE ATTITUDES

It is a psychologic fact that "the nature of early feeding experiences, occurring in the most highly formative stage of human life, have an almost indelible effect on the personality. For some, these experiences are highly satisfying—equated with love, pleasure, protection, and comfort. In the extreme case, the child may never be willing to leave this stage. He may be unwilling to strive, to experiment, to seek anything different" (1).

> Dietitians who have worked with obese patients know more vividly than I how intensely important is the motivation of the patient to reduce, to forego the *satisfaction* of eating. For many of these people the simple satiation they knew in infancy is the prototype of pleasure, and it requires the most intense self-sacrifice to deprive themselves of it. No substitute is sufficient to eradicate the pain; these patients will lie to themselves as well as to the dietitian about what they eat and how much, will suffer ridicule, criticism, and even ostracism rather than endure the agonies of deprivation which limited intake brings to them.
>
> A child of seven was hospitalized for extreme obesity. No physiologic deviation could be found to account for it. Investigation revealed that the child lived with seven adults, who ate at different hours because of their occupations. Her only social pleasure was in joining each one as he ate; then and *only then* did she get attention, interest, and affection from these people. She therefore ate seven full meals a day, plus snacks at other times.

"For others, the experience is not so pleasurable. Pain, harshness, indifference of a rigid schedule or an unavailable feeder, illness, anatomical obstructions, ennui, etc., may turn the first feedings into nightmares of displeasure, revulsion, or pain. Then one may have a picky, fussy eater—which in turn interferes with digestion and personal happiness at the table. These people are often called sour" (1).

> The child who refuses to eat is generally found only in homes where there is adequate food for nutrition. However, once the emotions of antagonism and revulsion become attached to food and to eating, it is not uncommon for refusal to eat to reduce intake below the level physiologically necessary. Those of you who have worked in either children's or psychiatric hospitals have probably seen patients whose anorexia has led to literal starvation—occasionally, such patients die of hunger. Another characteristic you may have noticed is that such patients almost invariably seek and accept most readily foods of early infancy—milk, very bland and smooth-textured dishes, or the sweets which have always been used as symbols of reward and affection in our society.

Thus, diet and eating become associated in everyone with happiness and with pain—with varying balance of these feelings. Most people are not exposed to the extreme experiences and feelings which we find in anorexia nervosa or in obesity. Nevertheless, the particular person develops a liking for this, a dislike of that, preferring one flavor to another, an interest in new sweets but antagonism to strange vegetables, and so on.

FOODS AVAILABLE TO THE CHILD

In addition to the emotions which are brought into play in the early years of eating, there is another tremendously important influence—the foods to which the child is exposed. In upper middle class homes, the child is early introduced to meat, a variety of vegetables, and to different ways of preparing them. Furthermore, he is permitted to explore a range of foods that are beyond his needs—he tries

olives, coffee, even cocktails or wines on occasion. If he dislikes them, the adults will assure him that he needn't like them now, but he may when he gets older. Candy is often set out on a plate or dish, and he eats it when he wants it; he does not need to beg, sneak, or do some especially wonderful thing to *earn* a bit of dietary pleasure. Consequently, he often never develops the craving for sweets we find in less indulgent homes.

In the less sophisticated household, however, the notions of what the child can and cannot eat, of when he may eat this and *must* swallow that, are much more categorical and are laid down with final authority. Having, over the period of growing up, compromised with his family that he will eat these dishes and no others, he is poorly equipped to make easy modifications in diet—whether he is told by a dietitian or by a waitress. He is, in fact, more receptive to the waitress, since she presumably shares his views about food and would not willingly intrude on his preferences.

APPETITE UNDER STRESS

It is important for the dietitian to understand that food preferences are strongly linked to the social and personal status of the patient or client. It is the rare person who will consider combating her loneliness by trying some new food—she is much more likely to seek to reinstate more comfortable feelings by returning to foods that have been long-loved. Thus, one of the problems in every institution is contriving to serve foods that are familiar, customary, and acceptable to the people. It is bad enough for the dishes to be prepared in those strangely efficient and spotless kitchens by non-motherly people dressed like scientists, bad enough for the foods to be prepared in huge quantities with no concern for the exact way the patient loves her eggs or her breaded veal, bad enough to sit down to eat without one's customary meal companions. If on top of all this, the foods are odd, the recipes and seasonings new, the homesick or lonely eater finds practically no pleasure in the meal.

The sick individual is in much the same plight as far as food is concerned. With reduced energy for out-going interests and experimentation, with the discomfort of disease itself, food preferences almost always turn away from the new and the highly flavorful, back toward the blander, smoother foods of earlier years. Sometimes, of course, the turning back leads to less bland foods; the ethnic patient may yearn for the pizzas or the stuffed cabbages of his childhood, fried fish or greens boiled for hours in bacon fat and salty water. The important thing is that the debilitated sick person is in no psychologic position to undertake to change his food preferences, and different foods which are given to him should be at least explained as necessary and useful in his present condition.

Opposition should not be met with retaliation, and deeply-felt needs should not be brushed aside. To do so is to insult the patient profoundly, and the fact that it frequently occurs in hospitals is certainly one of the best reasons why people consider a hospital a cold, unfriendly place, which they often do. It is not true, of course, but the patient who finds his deepest needs and wants categorized as unreasonable is not in a position to evaluate the broad situation and the goals of the hospital dietitian.

TIME FOR NUTRITION EDUCATION

What we have related here to loneliness and to general health is true of all people under stress. The time to make real gains in improving or modifying dietary habits is when the audience is happy and satisfied; it is easier in the cooking class and the neighborhood than it is in the hospital or in the disaster kitchen. The very partial success of our attempts during the last war underline this; while shrimp is now (postwar) becoming increasingly popular, the wartime, war-worried, war-overworked public was in no state to find new pleasures in food. Rather, they looked to their diets to sustain morale and energy by giving them plenty of the same beef, potatoes, green beans, and ice cream that they had been reared to believe made up the best diet.

In dealing with unsophisticated people, the dietitian is also often confronted with complexities that our statements so far do not explain. In the next section, some of the most prominent psychologic uses and meanings of food are presented. These are: food as a substitute; food as a weapon; food as a technique of punishing and rewarding; food as a symbol of social prestige.

FOOD AS A SUBSTITUTE

In dealing with obesity, the dietitian is aware that food is often used as a substitute for other kinds of satisfaction that the patient is unable to acquire. The homely adolescent reaches for a sweet while she hungrily reads about movie heroines and watches her prettier friends pair off after school. The dull-minded child hangs around the neighborhood delicatessen and drinks pop while his more fortunate friends play baseball or build airplanes. The frustrated worker comes home and eats and drinks and eats and drinks until he feels at peace with his world.

There are at least two reasons for the ease with which people use food to replace other kinds of emptiness: (a) it is easy for Americans to get, and (b) everyone has a right to it. The obese patient will often complain that she eats no more than she is entitled to, than "my share."

Even the person who does not *over*eat uses food as a substitute for other pleasures—and this is more easily overlooked. In many cases where diet must be managed, it is fruitful to explore this area and

learn what food can replace for the patient. If the cardiac patient who is allowed only limited physical activity can enjoy and get a lift from custard pudding, it would be clever of the dietitian to make place for it in his diet.

MEANINGS OF FOOD

Food also has magical connotations for most of us. Americans are not as superior to primitive man as they like to believe, in respect to magic. For example, it is a common belief that glands and visceral meats are less energy-giving than are muscles, and there is a widespread American revulsion to eating nerve-structures—they seem somehow uncouth.

Most recently, we have been confronted with horse meat; there seems no exception to the view that the flesh of a work animal is not as desirable as the flesh of an animal created and bred for cultivated tastes. It is *insulting* to think that one's palate should be tempted by the flesh of a beast of burden.

FOOD—THE UNSPOKEN LANGUAGE

More practically, we find that foods and dishes are commonly categorized as rewards, punishments, or fill-ins by the housewife who prepares and serves them. She has no difficulty communicating her affection and warmth to her family by the meal she places before them—and if she serves steak, chocolate milk, fruit salad, and ice cream her family will be sure she is either celebrating or is warming them up for something important. If on the other hand, she serves liver, spinach, and a starch pudding or cookies, everyone knows that she is displeased with them, that they have somehow failed to get her affection *that* day. She may deny that she is punishing them, saying "They have to eat those things once in a while, because they are *good* for them," but even she is aware that she has withheld her love and has subjected them to unpleasantness.

Here, as elsewhere, we observe the cook using food as a weapon—as a technique to punish, reprimand, or encourage. She can manipulate and influence her family by the foods she serves them. Little wonder, then, that she does not faithfully follow the standard, perfectly balanced diets offered her by the food editor or dietitian unless she is really impressed with the necessity of doing so.

For the child and husband, too, food is a weapon. It is easy to communicate indifference or resentment by not eating what is served you, or by overlooking the special efforts made. Traditionally, the loving family staunchly likes Mother's food—even when the biscuits are burned or the coffee is undrinkable. Mother also realizes the reverse—that when Junior steadfastly refuses her cooking, he is being nasty to her, and when her husband prefers to eat out, it is because he doesn't love her as a husband *should*.

Turned against oneself, food is also often used as a weapon. The conscientious person denies himself the pleasure of things he especially loves—steak is too expensive, candy not good for him, bread too fattening, and so on. The guilt-ridden person will go farther, and often really loses his appetite out of his belief that *he* should not be coddled and comforted in this base, physical way. Fasts and dietary restrictions are undertaken for penitence, both by members of institutions and by private individuals responding only to their own consciences.

FOOD FOR PRESTIGE

In the neighborhood, food is the housewife's weapon—her knowledge and skill are earmarks of her prestige and of her claims to respect and deference. She uses recipes to a great extent here, and her desserts, particularly, are objects of discussion and interest.

Food is also used as an indicator of one's social sophistication, prowess, and gentility. In general, foods become hoity-toity when they meet one or more of these criteria: rare, expensive, difficult to prepare or infrequently liked, extreme in flavor or taste qualities. It is easy to understand why social prestige is attached to knowing and liking brands of champagne, anchovies, caviar, lobster, abalone, and imported liquors. As a person strives to gain entrée into a more sophisticated social group, he will almost invariably be alert and receptive to their food preferences and dietary habits. Failure to do so may well mean failure to get "in."

SUMMARY

This general discussion of psychologic facts and factors in dietary preferences is largely aimed at bringing to light some of the differences in the views held by professional dietitians and the people who make up their patient loads and clienteles. Food, diet, eating, and serving are highly emotionalized areas to everyone, and they cannot be practically handled by dealing with rational factors alone, as the dietitian must do in her scientific considerations. She has, however, the weapons of tremendous knowledge and of an authoritative, professional position in society; these, coupled with understanding and elucidation of her patient's feelings, can augment her success in dealing with their problems. The facts of psychology are less concrete than those of physiology, although they are similarly real and resistant to transgression.

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FAO Visits Latitude Zero

Ecuador, rich in agricultural resources, is nevertheless shockingly malnourished, according to Dr. Lawrence Campbell, food technologist for the Food and Agriculture Organization, who has just completed a report on Ecuadorian food habits and needs.

Animal protein is desperately needed by the bulk of the population. The average Ecuadorian diet contains 1350 calories per day. Consumption of milk and milk products is no more than an average 100 gm. per person per day, and average meat consumption is no more than 1 oz. per person per day. Other nutrients in addition to animal protein which are badly needed are calcium, iron, fat, and some vitamins. Nutritional anemia and below-normal height and weight are characteristic of many Ecuadorian school children.

Dr. Campbell rates highest importance to greater production of milk, meat, and fish to improve Ecuadorian food production and nutrition. Pasteurization plants and slaughterhouses are needed, as well as improvements in roads and transportation. Few good roads exist, and some of the most important ones have surfaces wholly or largely of earth. Other roads go through mountain passes subject to landslides and need constant repair. Because of the lack of good roads, much personal traveling is done by air. These transportation difficulties, plus communication problems, cause immense stretches of rich land to lie idle. They also hamper distribution of food from some productive areas.

For example, many more fish could be landed on the coast of Ecuador than can be kept fresh during transit across the country. Supplies of fresh sea fish now on sale in Quito go by air to the extent of about 3000 lb. per day. Dr. Campbell has suggested improvement of the primitive local fishing methods. At present, some experimentation is going on for mechanization of the national fishing fleet by providing outboard motors for fishermen's canoes. More frozen tuna is exported from Ecuador to the United States than is consumed at home, but this particular export is important to national economy.

Bananas, Ecuador's most important crop and export, are also being overlooked as a possible food source and are difficult to distribute because of transportation and communication difficulties. Among Dr. Campbell's suggestions for new uses of bananas are: dried bananas; banana flour; banana powder (in infants' food and to aid in celiac disease therapy); banana flakes; banana candies and jam; banana yeast; banana wine, vinegar, and liqueur; canned bananas; and banana fodder.

Naranjillas, another Ecuadorian fruit, grow wild and are halfway between the tangerine and the tomato. A smooth, thin outer skin of yellowish-orange color gives a tangerine-like appearance, but a hard second skin lies underneath. Botanically, the naranjilla is designated *Solanum quitensis*, after a Jesuit missionary, Solano, who arrived in Ecuador with the Spaniards and lived in Quito. Naranjilla juice is popular in Ecuador, and Dr. Campbell believes that some commercial firm may eventually find it profitable to can and export the juice if the flavor can be retained. The trees, however, are not being cultivated in commercial orchards, although thousands grow wild on the slopes of the Andes.

Cocoa is important in Ecuador, although the crop today amounts to a little more than one-third of its peak in the 1920's. Some reasons for the decline are: diseased trees; low prewar prices resulting in lack of interest in maintaining the trees; increased age of the trees; and possibly decreasing soil fertility.

Cocoa is dried in a novel way; in suitable weather, cocoa beans are spread during the day in layers three or four beans deep in certain streets of seaport towns. The odor reaches half a mile. Then they are shovelled up as evening or rain approaches. Streets used for this purpose are just outside or close to the storehouses, and the owners of these storehouses pay street rent to the municipality for the right to dry cocoa there. Asked about local reaction to this custom, Dr. Campbell said, "No, there are no protests from housewives and other shoppers about the lack of pavement to walk on. Probably they enjoy the good odor from it."

Dr. Campbell made one main and urgent recommendation to the Ecuadorian government concerning proper nutrition: "Nutrition education should not be confined to schools but should, if possible, be carried to every Ecuadorian home."

Layout and Labor[1]

MARY W. NORTHROP

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GRANDMOTHER'S house was full of nooks and crannies, but is that the kind of house you would build today? "Life is too short," you will tell me, "to allow for waste motion. The house should be functional. It should give a sense of freedom and space. Therefore, it should have a minimum of divisions." Our point of view has changed in the first half of the twentieth century. Our industrial plants not only have kept pace with the century, but are in the vanguard. And our hospitals? Are they 1901 or 1951?

The answer is that they are both. Medical practice is certainly 1951. Not long ago the laboratory was little used, the X-ray was for the purpose of determining whether a bone was fractured, and the use of intravenous therapy was a rare last resort. Times have changed! Has the physical plant changed correspondingly? The X-ray department and the laboratory are more apt to have been modernized than some of the other areas. The nurse of fifty years ago would be completely bewildered by the new procedures, but her working area would be familiar. Nor has the kitchen changed as much as it should. Hospitals never seem to have money to spend for remodeling! Any businessman knows that he must *find* the money for modernization or close his business. No sensible restaurant operator would attempt to make ends meet in most present-day hospital dietary departments. Are dietitians too patient, or do they lack imagination?

To make money it is essential to spend some money. Nowhere is that more true than in the relation of layout and equipment to cost of labor, and no cost is now more important.

None of us would want to set the clock back. It used to be that wages of culinary workers were low and kitchen managers were content with low-grade people, because kitchen work was supposed to be simple. In the present era of increased wages, it behooves us to use this most expensive of commodities to the best possible advantage. This is not an unmixed evil for management, since it forces us to use ingenuity. One of the discoveries we have made is that we were wrong ever to suppose that a kitchen was a proper place for low intelligence. Kitchen work is not simple. It involves a variety of skills and responsibility for expensive materials and equipment as well as for safety and sanitation. In the purchase of labor, as in the purchase of anything else, you get what you pay for, and we should now be paying for good quality. We must see that we get good quality; and then we must see that our employees earn their pay. That is the dietitian's job. It does not mean cracking the slave driver's whip, a completely outmoded method in personnel management; nor does it mean urging people to work beyond a comfortable speed. In a food service department rush means confusion, accidents, spilled food, and broken equipment.

The alternative is, first, careful study of the situation, of the job to be done, of the facilities in relation to the job, and of the organization of the people in relation to the job and the facilities. As the result of such a study, there appears a whole decalogue of "thou shalt nots," but only a trio of "thou shalts."

(1) THOU SHALT NOT PAY PEOPLE FOR LESS THAN THEIR BEST

It behooves us to provide working conditions which promote efficiency.

It is accepted that office people do not work at peak efficiency in noisy places, and acoustic ceilings are provided. Are kitchen workers different from office workers? Is the front office of your hospital treated for sound? What about the dietary department? If not, why not? At the least, the recommendations of an engineer competent in this field could be requested.

Lighting

Then there is the question of seeing, which involves several factors. One of them is the intensity of light. In the handbook titled "Hospital Electrical Planning for Architects and Engineers," published last year by the Westinghouse Electric Corporation, the statement is made that electrical requirements of hospitals have doubled in the last ten years, and the following minimum standards are recommended:

[1] Presented before the Oregon Dietetic Association in Eugene, on November 3, 1951.

10 foot-candles in locker rooms, toilets, stairways, and corridors
20 foot-candles in storerooms, refrigerators, and kitchen (except over ranges, steamers, and kettles)
25 foot-candles in cafeterias and dining rooms
30 foot-candles in the diet kitchen, office, and formula room, over the ranges, and in the meat-cutting areas

Most dietary departments were not originally provided with this light intensity, and the problem now becomes one of making old wiring take an increased load. In a study of five hospital kitchens in Seattle in 1947, Yako Tada found the following conditions:

Hospital A, built in 1931, had a number of areas, including the cook's unit and the range, where only 4 foot-candles of artificial light were provided. Only over the pot sink and over the clean dish table were the readings 10 foot-candles. The average of all readings was 5.7 foot-candles, slightly over half the legal minimum in Seattle. The light at the dietitian's desk was 5 foot-candles despite the fact that office lighting should be 30 foot-candles or more.

Hospital B, a very old kitchen, showed an average of 6.4 foot-candles, but the light at the desk was even lower than in Hospital A.

Hospital C, built about 1923, had fairly even lighting throughout, with a high of 9 foot-candles over the range, a low of 5 foot-candles at the cook's table, and an average of 6.4 foot-candles.

Hospital D, with a kitchen completely remodeled in 1940, showed a slightly higher average of 8.4 foot-candles, but the meat-cutting and vegetable units showed only 2 foot-candles, and various other areas were below 10 foot-candles. None came up to the Westinghouse standard.

Hospital E, remodeled in 1946, had an average of 12.8 foot-candles. Hence it was the only one meeting the legal standard, but even here there were one or two dark spots.

In other words, only the newest of the kitchens met the 10 foot-candle requirement of the Seattle city ordinance. None approached the Westinghouse standard. Yet industry has found that adequate lighting is essential to safety and to a high level of production.

There would be several simple ways for these hospitals to improve the quantity of light in their kitchens. One would be to repaint their walls and ceilings. It is recommended that ceilings be a flat white with a reflection factor of not less than 70 per cent and that walls be a light color with a reflection factor of 50 to 60 per cent. The darkest of those five Seattle kitchens has a buff ceiling and upper walls (reflection factor probably 40 per cent) and brown lower walls (reflection factor probably 10 per cent).

Light loss due to dirty lamp fixtures, dirty walls and ceilings, under-voltage operation of lamps, operation of lamps past their prime, empty sockets, and neglected burnouts should also be checked.

Fluorescent tubes give twice as much light as incandescent bulbs using the same voltage and would, therefore, appear to be the ideal answer to the problem of increasing the amount of light where the wiring of the building does not permit great increases in voltage. However, fluorescent lighting presents two problems which make one reluctant to use it in food service departments. One is flicker, which is disturbing, and the other is color distortion, which makes food look abnormal and unattractive. It seems likely that new developments may have overcome these obstacles and that fluorescent lighting may be the solution of the near future.

There must be proper quality of light in addition to an adequate quantity of light. Glare must be controlled by the type of lighting fixtures used and their location and by attention to shiny surfaces. There is also the rudimentary principle of arranging work surfaces so that when daylight is used, it comes from the worker's side, preferably the left side. How many kitchens have work counters or sinks along the wall under the windows and other work units parallel with the outside wall instead of at right angles to it?

Ventilation

Then there is the question of ventilation and temperature control. There is no reason to suppose that culinary workers are any more efficient in hot, humid places than office workers are, and business found out long ago that comfort pays. In a kitchen, attention should be paid to insulation of cooking equipment for fuel economy as well as comfort, to removal of heat and humidity unavoidably generated in the cooking process, and to an adequate, mechanically-provided supply of fresh air.

(2) THOU SHALT NOT PAY FOR DISCOMFORT

Attention should be paid to facilities for the reasonable comfort of employees. Clean, light locker rooms should be provided, with a locker for each employee, space to change clothing comfortably, and sufficient toilets and washbowls. A rest room with cots should be available for women employees, and there should be a sitting room or comfortably furnished lobby which employees may use.

The "help's dining room," with a lesser grade of food and service than is provided for professional personnel, is outmoded. If we wish to have self-respecting, dignified employees, we must build up their self-respect and their dignity. Where segregation of dining rooms is still maintained, one facility should be at as high a level as another.

(3) THOU SHALT NOT PAY FOR UNNECESSARY CLEANING

Every space and every object in the department must justify itself. Stand in the middle of the kitchen and look around. Pause at each open space, each wall, each door, and each place of equipment, and ask its use. Does the wall serve to close in an area

which really needs to be enclosed, or to separate two areas which need to be separated? Remember, Grandma had walls and doors. If there is any doubt about a door or a piece of equipment, post a piece of paper and a pencil on the wall beside it and ask the personnel to tally every time the door is closed or the equipment is used. A door which is never closed is useless, and the use of equipment must be frequent enough or important enough to be worth while.

Having decided what is superfluous, what is to be done about it? The doors and the equipment are easy, but to take out a wall, one must use persuasion. A wall must be washed on both sides at least once a year and painted on both sides every several years. Calculate cost of removing a wall against one paint-job and three washes. Then, barring the possibility that it is structurally necessary, blow your trumpet and see that wall come tumbling down.

Give away extra space or build it into an extra storeroom.

Move things away from walls so that cleaning behind them will be easier. Get rid of false bottoms, elaborate exposed plumbing and ornamentation. Specify smooth surfaces, rounded corners, and careful construction when new equipment is bought.

Portable equipment which has occasional use can be wrapped up and put in a storeroom. Fixed equipment which is used only occasionally can be covered to protect it from dust.

(4) THOU SHALT NOT PAY PEOPLE TO GO FOR A WALK

We should analyze each movement of employees, asking ourselves, "Is this step necessary?"

Each employee or group of employees should work within a unit which is as compact as possible and which is contiguous to any other units with which it has frequent business. Each unit should include working surface, an aisle, and storage for needed equipment and supplies. Its size should be carefully computed. For most purposes, a worker can use efficiently a table $2\frac{1}{2}$ ft. wide and 6 or 8 ft. long. He can move comfortably in an aisle 4 ft. wide, and its width permits him to use both sides of the aisle without walking.

When the worker leaves his unit, he should travel in as direct lines and be deflected by as few barriers as possible. This is another reason for elimination of unnecessary walls.

There should be sufficient trucks, wheeled tables, and dollies available so that it is never necessary to make two trips because hands could not carry enough at one time. This means that trucks must be considered in planning main traffic aisles.

Where gravity can be made to serve, as in planning dishrack returns, it should be utilized.

Wires should certainly save feet in providing for communications. Executives don't run around factories to deliver instructions that could be given over an intercommunicating system, nor do you see service personnel in well-run restaurants making one trip to the kitchen to tell the cook their needs and a second trip to fetch the prepared order. Electricity has been discovered, and it works for less than human wages.

Every operation consists of three parts: get ready, do, and put away. The first and the last parts are especially susceptible to improvement if careful consideration is given to them in the early stages of planning.

(5) THOU SHALT NOT PAY PEOPLE AND THEN NOT GIVE THEM SPACE ENOUGH TO WORK EFFICIENTLY

Before the kitchen is planned, an estimate must be made of the number of people who will work in each unit during its peak load, and space must be planned accordingly. If there is to be only one salad worker, for instance, the salad table will be only 6 or 8 ft. long. If there are to be two, twice that space will be needed. In that case, two tables will be better than one long table. Movable tables should not exceed 8 ft. in length to facilitate cleaning and for greater flexibility of arrangement.

The arrangement of furniture can provide for the separation of workers which was formerly accomplished by walls, without erecting barriers.

Working aisles should be distinct from traffic aisles. Provision should be made for through traffic outside of working units.

(6) THOU SHALT NOT PAY FOR FATIGUE

We must remember when the original plan is made that lifting, carrying, stooping, and stretching are to be avoided. Early thought is necessary so that the floors of walk-in refrigerators will be level with the floors outside, with insulation provided in the floor construction. Doorways must be wide enough. Aisles must be planned so that trucks may be loaded in accordance with the basic principles of body mechanics.

Cupboards and storage areas should be planned at a comfortable height to avoid stretching and stooping. Work tables should be narrow enough so that there will be no need to stretch.

Sinks should not be too deep. It is the bottom of the sink which is used, not the rim. Little is gained by having the edge of a sink yardstick-high, if it is a half yard or more deep, nor should a sink be so wide as to necessitate a stretch to the faucet or to the back corner. There is no purpose which requires a sink more than 2 ft. from front to back, or more than 14 in. from rim to bottom. A 12-in. depth is adequate for most uses.

There is a very simple trick in the placement of ovens. In a three-tiered bank of ovens, frequently a 12-in. oven and two 8-in. ovens are used. Why is the 12-in. oven, which is used for heavy roasts,

usually put at the bottom? If it were in the middle, the roasts would not be lifted at all, for this oven would be at table height. The pans would slide from the cook's work table to her run-around table, and from that into the oven; then back again by the same route to the carving block, without any lifting.

Work should be done with the body in a comfortably erect position. Many operations which we have supposed require standing can be performed with the worker seated, if knee space is provided under tables and if stools are of proper height. High stools should have foot rests.

(7) THOU SHALT NOT PAY HANDS TO DO THE WORK OF MACHINES

We should buy the specialized machines that take the place of hands. This is not a contradiction of the earlier statement that every piece of equipment must justify its existence. Certainly not one gadget which does not pay its way should be given storage space, but the dietitian must be alert to new developments and must spend money for certain items of equipment to save money on wages.

Every kitchen has its large mixer. Would it be profitable to have one of household size as well? A hand whip is in use rather often for operations which a small mixer would do. Are hamburgers served? A simple hamburger molder costs very little.

Are you a desk worker? Consider the economy to the dietitian herself of using a desk pen instead of a fountain pen with its eternal pen-cap screwing. Then carry the same thinking through the department.

Kitchens are using more specialized equipment for everything. The big, old flat-topped range is gone. Storage is custom-built to fit needs. There are special sandwich tables with little wells for spreads; special frying equipment; and garbage grinders which do away with transporting garbage and cleaning cans.

(8) THOU SHALT NOT PAY FOR DOUBLE HANDLING

Equipment should be provided to reduce transfer. If specially planned, dollies can be used instead of shelves in storage refrigerators, for produce can be loaded on the dollies in the receiving room, rolled into the refrigerators, left there, and later rolled out to the vegetable unit. The same can be done with many other products. Each dolly should be specific for its use.

Movable dish storage units instead of those built into the counter can be loaded in the dishwashing unit. Cup and glass racks greatly reduce handling.

Adequate storage space also saves handling, especially since deliveries are now made on a five-day-a-week basis, requiring hospitals to carry a larger stock of milk, bread, and other perishables on hand. Where facilities date from daily deliveries, storeroom porters must shift things from one place to another to find room.

Trace each food from receiving room to plate and see how many times it is picked up and put down again. Then see how many of the transfers can be eliminated.

(9) THOU SHALT NOT PAY FOR THE HANDLING OF SINGLE UNITS

We must provide for handling things in groups.

Are the dining-room water fountains planned to hold the same glass racks which fit the dishwashing machine, or must the glasses be unloaded onto trays or shelves?

How are small creamers handled? There is a basket in which a number can be washed, filled, stored, and served at one time.

Carrying a number of things at one time is heavy—but why carry? The wheel was one of the earliest inventions of civilization.

(10) THOU SHALT NOT PAY FOR TWO HANDS AND USE ONLY ONE

Careful consideration must be given to planning within the unit. This means detailed analysis of the functions of that unit, perhaps including some role-playing. Every move should be foreseen and tools and other equipment should be pre-positioned. The rules of motion economy should be observed. Drop delivery should be used wherever that can be arranged.

THOU SHALTS

Now look at the other side of the picture, at some of the things we *can* afford.

(a) We *can* afford any amount of expenditure of creative imagination. That makes the difference between success and mediocrity in any field, including dietetics.

(b) We *can* afford any reasonable expenditure of managerial time in working out a plan. Just as we must spend money to save money, so we must spend time to save time. The dietitian might practice first on her own working unit, the desk.

(c) We *can* afford any money expenditure for capital outlay which saves its cost in three years by saving either labor or materials. To sell such a program, the dietitian must be able to assemble facts and figures and to present them effectively.

Let us first be sure we *have* a light, and then not hide it under a bushel basket.

Ascorbic acid deficiency interferes with and even prevents reproduction in the guinea pig, according to results of a study made at the Kansas Agricultural Experiment Station. Degenerative changes were observed in the reproductive organs, and such embryos as were formed were retarded and abnormal in development. Male guinea pigs succumbed to the deficiency's effects sooner than females, and young animals sooner than older ones.

Food Cost Control in Colleges[1]

MILDRED A. BAKER

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FOOD cost control in a college must be considered in relation to the objectives of the department and the broad objectives of the institution. Colleges attach varying degrees of importance to food service for students. Some colleges are getting as far away from food service as possible.

There appears to be a trend in others in the direction of the pay-as-you-go, choose-what-you-will cafeteria or coffee shop service which operates on a basis which is little different from any similar commercial operation. It is thought, I believe, that a student who chooses what he wants to eat will be more satisfied than if he must eat what is placed before him. That, perhaps, is true. There are excellent opportunities for effective nutrition education in this type of college food service, and perhaps if great skill and ingenuity were exercised, quite a satisfactory result from the standpoint of the students' nutritional status could be achieved.

My preference is for the package combination of room and meals at a fixed fee for the semester or year. This type of food service easily lends itself to the development of objectives which contribute to the total educative process of a young person. It is also the most economical method of paying for housing and meals. Two important objectives of this type of food service are: (a) meeting the nutritional requirements of the age and activity group into which college students fall and (b) adapting accepted business procedures to the operation of the department. My comments concerning food cost control methods will be related to this type of service.

The financial management in the "package" plan is relatively simple and consists of several logical steps. First, a rate for board must be established which makes it possible to meet all the financial obligations of the department, the estimated number of customers for the year having been carefully predicted.

The percentage of income which is budgeted for raw food should be estimated in a businesslike fashion so that the nutritional requirements of the students can be met and the other financial obligations of running a food service department as well. This raw food cost percentage varies greatly throughout the country, but in a large department responsible for all costs of operation, I suspect that it does not often exceed 40 per cent. In some extremely well-run organizations, high quality food which meets excellent nutritional standards can be provided for less. It is important here to give proper consideration to absenteeism, which in this system is bound to exist and which can be predicted with pin-point precision if proper records have been accumulated over a period of time. Because of absenteeism, the actual raw food cost per person will far exceed the percentage allowance. This is an important consideration in planning.

RESPONSIBILITIES OF COLLEGE FOOD SERVICE

In college food service we are and should be in the unique position of insisting upon highly efficient operation and businesslike management, not to increase profits—that is not our motive—but rather, to have food costs as high as is consistent with sound over-all management. Our customers come for three meals a day, 240 or more days of the year. We are responsible not only for pleasing them, but for their nutritional status, which relates directly to the quality of work done in the classroom. We have the further responsibility of helping to form good food habits as an accepted pattern of daily life. Our customers are particular and skeptical. They are full of complaints based, in many cases, only on the fact that the food is different from that served at home, and many have not had the opportunity yet to develop discriminating judgment about food. Also, the anxieties which develop in other areas of campus life are quickly reflected in undesirable attitudes toward food.

So it is that the procedures for food cost control in a college should appropriately have as their objective not more profit to the college, but more and better food to our customer, the student. But while our motives may be different from almost any other type of business, the methods of control are precisely the same.

They run the usual gamut of control in purchasing,

[1] Presented at the 34th Annual Meeting of The American Dietetic Association in Cleveland, on October 12, 1951.

receiving, issuing, storing, inventory, control resulting from proper experimental work which is the basis for production control in the kitchens, and control coming from tailor-made reports, promptly and accurately executed. All of these are important, but no one of them is worth much without supervision of the fine, enlightened, devoted quality that an interested and well-trained dietitian can give.

I would like particularly to discuss the food cost control which results from (a) proper purchasing, (b) a well-developed test kitchen program as the basis for food production control, and (c) the important place of the food supervisor.

FOOD PURCHASING

College food service the country over should be recognized as big business. Many colleges are serving 15,000 to 30,000 meals per day and are operating businesses which can amount to $4 or $5 million a year. If 40 per cent or more of this gross income is spent for raw food, the importance of purchasing becomes immediately apparent. It is no less important in schools doing a smaller volume of business. It is here that money can be made or lost by the thousands of dollars, depending on the ability and judgment of the food buyer. Purchasing food in quantity is a job for an expert and requires not only knowledge of food quality, but a knowledge of contracts, market trends, transportation costs, the price effect of varying growing conditions the world over, some understanding of governmental directives as related to the probable supply of innumerable food items, and so on. Few of us can consider ourselves to be expert food buyers unless we have had much training and experience beyond that which is necessary to become a dietitian. However, we should have a fine and discriminating food sense and knowledge of what foods are appropriate for specific purposes. We can make our contribution to the purchasing procedure by advising in this area of our expertness and expecting that our advice be followed.

Other important elements of a sound purchasing procedure, in addition to a qualified food buyer, are well-developed specifications; ample storage facilities with proper handling equipment and temperature and humidity control; proper loading and unloading arrangements; and the authority to complete a business transaction without delay and red tape that sometimes characterize a college purchasing procedure. A separate purchase order for the food service department, designed to meet its particular needs, should be approved if the regular system of purchasing does not meet the requirements of this type of buying.

Procedures and facilities for expert food buying are fairly simple to achieve as compared to the efficient, day-by-day use of them. Here the highest skill and judgment are needed. Specifications are of little value unless personnel can be trained to evaluate merchandise according to its specification. Someone must be trained to say: "This we will keep; this must go back." The reputation of being a good buyer is hard-earned and rests on many tests of judgment which come at the point of accepting or rejecting purchases on the basis of specifications. Every food supervisor in an organization should be trained to assume a watch-dog responsibility over food quality, for who knows better than they that first-rate meals cannot be produced from food of inferior quality.

TEST KITCHEN CONTROL

Food, having been expertly purchased, must be as skillfully prepared. A second important element in food cost control is a planned testing program to develop recipes and to make other quality control checks related to food purchasing. There are thousands of so-called standardized recipes, but the fact remains that all or part of the job must be done to fit the needs or standards of each organization. It can be done without a test kitchen and staff, but both implement what is at best a long, tedious, and never-finished program. To make progress, a long-range program should be developed and should be rigidly followed, but sufficient flexibility should be allowed to solve the perplexing problems that arise daily.

In the test kitchen can be found the answers to whose gelatin dessert powder will carry the most water or fruit juice, and at what price differential between lard and hydrogenated fats does lard become a practical product to use even for deep-fat frying. Here we can develop countless ways to enrich a student's diet with nonfat dry milk solids at a tremendous saving over fluid milk. Here we can check whether our eggs bought at the low of the market last spring and stored under nearly perfect conditions compare favorably with those of similar grade bought at present prices.

The careful development of recipes, which will contribute to the nutritional and cost objectives you have set for yourself, is a tremendous job and a basic one to good food cost control. Here agreement can be reached not only on formulas and cooking methods, but on standard portions as well. A well-developed testing program and an adequately equipped test kitchen represent a major step toward scientific food cost control in college dining halls. A test kitchen is not a luxury in a college food service department.

GOOD SUPERVISION

The third major point which I want to consider in food cost control is the value of good supervision. It makes no difference how fine your procedures, reports, forms, and blanks, if they cannot be put into the hands of competent supervisors for execution.

What are the characteristics of a good food supervisor or dietitian? Certainly she has sound technical training and is proficient in its use. But a good supervisor must be, first of all, a fine person—a person who has given thought to the major social problems of the day; a person who acts always on the assumption that her own job matters; a person who is able to have a feeling of deep devotion to the high purposes and objectives of that department with which she is associated, and who does, through the ethical performance of her duty, contribute to achieving them; a person who has the type of leadership qualities described by Mary Follett in her lecture on leadership theory and practices (1).

The type of leadership she describes has its beginnings in a thorough understanding of the job and is characterized not by ordering men, but by serving them. Her theory of leadership does not limit the importance of such qualities as "initiative, the ability to seize opportunity, the high integrity which inspires confidence, the power of communicating enthusiasm, the power to liberate and make articulate one's own impulses." But it attaches more significance to the responsibilities of a leader than to the authority which we are apt to associate with a title.

Does that seem strange talk in relation to our subject, "Food Cost Control in Colleges"? I do not know how real cost control or any of the other aspects of good management can be achieved without this type of leadership.

If I have seemed to neglect some important phases of food cost control—the details of a food cost accounting procedure, a description of how to receive and issue supplies, the pros and cons of perpetual inventory, and many other details—it is not because I do not attach importance to them. It is rather that I feel real cost control results from breadth of scope in total organization planning. Three important aspects of this planning seem to me to be a sound purchasing procedure, a testing program as the basis of food production control, and devoted supervision.

REFERENCE

(1) FOLLETT, M. P.: "Some Discrepancies in Leadership Theory and Practice." *In* Dynamic Administration—The Collected Papers of Mary Parker Follett. H. C. Metcalf and L. Urwick, eds. New York: Harper & Brothers, 1942, Chap. 13.

FAO Brings Home Economics to Syria

Syria's facilities for home economics instruction, until 1951, consisted merely of a few ill-trained teachers, some superficial "vocational" courses in cooking and sewing, and overcrowded classrooms with inadequate equipment. Ava Milam, Food and Agriculture Organization Technical Assistance Expert, was confronted with these conditions when she arrived in Damascus early last year.

Workshop training was the first step in Miss Milam's program. Equipment and visual media were procured and buildings rented for the project, which was held July 9 to 23, 1951, after the closing of schools and the traditional fast of Ramadan. In spite of temperatures ranging as high as 130°F., principals, teachers, and inspectors of schools came from all over Syria to Damascus to attend. Sixty-nine of these women had been selected by the Syrian government to participate; thirty others also attended.

By the end of the workshop, the home economics teachers were thinking as a group and asking for smaller classes, better equipment, and more money—and the Ministry of Education was giving these ideas serious consideration. Early in the program, when the U. S. Information Service photographers came for pictures of the students, some who still wore the traditional veil withdrew, but by the end of the course, no student left the room when photographers started shooting. One of the participants, Sophie Wakim Karayusuf, will soon complete an FAO-sponsored textbook in Arabic.

Nutrition, says Miss Milam, should be emphasized, since dietary improvement would have a far-reaching effect on national health in Syria. Short cuts in their elaborate cooking were formulated in the workshop. For example, Syrian meat dishes, which demand that the meat be finely ground, were found to be more easily prepared with meat grinders than with the customary pounding with mortar and pestle. The pressure cooker was another household appliance which was demonstrated, along with equipment in other fields of home economics.

Miss Milam generally recommends a large and integrated home economics program for Syria. Some of her suggestions are: converting the technical school for girls in Damascus to a demonstration homemaking school giving students a broad general education with home economics as the basis; teaching homemaking in the Syrian University to train women for adult education work with housewives as well as for teaching; and training hospital dietitians and "propagandists" in the field of education in homemaking. Miss Milam also recommends scholarships, provided by FAO and supported by the Syrian government, for girls who agree to work in their own countries in home economics upon completion of their courses. A home extension service is another of her hopes, the object of which would be the improvement of rural home conditions in Syria.

Merit Rating in a Dietary Department

LOUISE CRANDALL POLEY, KENNETH RINDFLESH, and OWEN B. STUBBEN

Denver Department of Health and Hospitals

OVER-ALL turnover for dietary employees in our hospital averages 2 per cent per month. Turnover, as we use it, is the relationship of all separations from all causes and the average number regularly employed. This 2 per cent is considered good because of the customary instability of personnel in a food service department employing more than eighty-five persons.

One contributing factor to this low rate of turnover and to improved morale in the department we feel to be our program of semi-annual merit rating, which has now been in operation for three years. Its value has been proved by the highly significant correlation which has been shown between those employees receiving high scores on merit ratings and those who have remained with us and are receiving raises and promotions. We also feel that it is a useful tool in making objective observations which are always difficult to obtain in large institutions.

When an employee is hired in the Dietary Department, he is told about the merit rating system and how it will apply to him. It is explained that high payroll costs, together with the fact that salaries come from city money, mean that raises are limited to those showing outstanding service. Although increases can be given only once a year after the initial six months' increase, merit ratings are made twice each calendar year. Ratings are discontinued only when employees reach the top salary level in their classification.

Also, semi-annual ratings have made it possible to clear up many minor deficiencies and increase the efficiency of people who might otherwise drop out of the department. This also serves to keep turnover to a minimum, and the amount of time consumed in training new personnel is decreased. Moreover, this system has the advantage of giving us the means of evaluating and correcting or eliminating poor work habits more or less as they appear. Another important aspect of this semi-annual rating is that it provides the supervisor with a method of re-evaluating her employees after they have received increases, thus calling to her attention the occasional worker who slacks off after receiving a favorable rating. Then, too, influences of the job on the worker are constantly present, causing work habits to change more rapidly than in a year's time. Many ratings made in January, for instance, would no longer be fair or justifiable by the following July.

In working out the rating scale, we have been careful to make all the factors for which an individual is graded positive in character. In addition, it has been set up with checks to help the rater to be fair. For instance, the number of factors under each general group heading has been varied in order to protect the rater from falling into a set pattern.

To rate an employee, two of his immediate supervisors usually confer. They might be two assistant dietitians, or the chef, dishroom or other supervisor and an assistant dietitian. It is felt that when two people collaborate in this way, they are more likely to reach an objective viewpoint minus a great deal of the "halo" effect of one rater. The form used is shown in the accompanying illustration; general instructions which the raters are asked to use as a guide are as follows:

General Instructions

Rate on the basis of what the employee is doing, rather than on the basis of how you feel toward him.

Guard against the tendency to overrate. By rating the employee "superior" when he is only "satisfactory," you actually are doing him a great injustice. Either he realizes he does not measure up to your rating and loses faith in your judgment, or he gathers a false sense of security which will be shattered as circumstances are altered.

Any reviewer is suspicious of a rating form on which an employee is given identical scores on most of the items.

Probationary employees must be rated at the end of their six months' probationary period. When promoted or demoted, employees must be rated at the end of six months of employment in the new class.

Raters are to use ink and the reviewer or department head representative is to use red pencil.

Attendance. *Absenteeism*, except due to unusual circumstances, disqualifies an employee from a "superior" rating. Two or three absent or tardy days with excellent cause may carry a rating of "very good." *Utilization of work time* entails making efficient use of available working time. The employee attends to the most important tasks first and uses the remainder of his time to complete more routine duties. His time is devoted entirely to matters pertaining to his work. *Promptness* is one of the easiest and best ways

EMPLOYEE MERIT RATING FORM
DIETARY DEPARTMENT
DEPARTMENT OF HEALTH AND HOSPITALS

NAME OF EMPLOYEE: Mary Smith RATING SCORE: 73

CLASSIFICATION TITLE: Salad Girl DATE: _____

USE THE FOLLOWING CODE IN RATING: A–SUPERIOR, B–VERY GOOD, C–SATISFACTORY, D–UNSATISFACTORY

ATTENDANCE (10)	A (4) LACK OF ABSENTEEISM		B (3) UTILIZATION OF WORK TIME		B (3) PROMPTNESS
APPEARANCE (11)	A (4) PERSONAL CLEANLINESS		A (3) NEATNESS	A (4) MEETS SANITATION REQUIREMENTS	
RELATIONSHIP (20)	B (4) COOPERATIVE	A (4) TACTFUL	A (4) COURTEOUS	A (3) ADAPTABLE	A (5) SELF-CONTROLLED
WORK HABITS (9)	B (2) PERSISTENT	C (2) DEPENDABLE	B (3) RESPECT FOR EQUIPMENT		C (2) WORK CLEANLINESS
WORK INTEREST (15)	B (4) ATTITUDE, ENTHUSIASM	A (4) STRIVES FOR IMPROVEMENT		A (3) MAKES CONSTRUCTIVE SUGGESTIONS	B (4) REACTION TO NEW WORK
WORK OUTPUT (8)	A (4) QUANTITY (SHARE OF WORK PERFORMED)	C (2) QUALITY (ACCURACY, THOROUGHNESS)		C (2) CONFORMS TO INSTRUCTIONS	D (0) UNDERSTANDING OF WORK REQUIRED

REMARKS: _____

_____

_____ SIGNATURE OF IMMEDIATE SUPERVISOR

I AGREE WITH THE RATING _____ I DISAGREE WITH THE RATING FOR THE FOLLOWING REASONS _____

_____

_____

_____ SIGNATURE OF DEPARTMENT HEAD OR HER REPRESENTATIVE

of evaluating an employee's attitude toward his job and working conditions. This applies not only to morning arrival but return from passes and lunch hours.

Appearance. The employee should be consistently neat and well-groomed. His personal habits should not interfere with or distract from good working relationships with coworkers or the public. The women must wear hair nets at all times, the men have their hair secured by wearing white caps, and all have clean nails and appropriate clothing to qualify for a "superior" rating.

Relationship. *Cooperativeness* includes recognition by the employee of the value of his supervisor's help to increase his efficiency on the job. He acts upon constructive criticism

and suggestions for improvement from his supervisor. He reports any facts which help the supervisor acquire a complete and accurate understanding of how the work is progressing and what problems are being encountered. The employee is considerate of his schedules, duties, and responsibilities of his fellow employees. He cooperates with others in accomplishing the work of the unit or department.

Does the employee show *tact* in that he says or does what is appropriate in dealing with others and uses this ability impartially with all types of persons?

Adaptability indicates the employee's ability to vary his work according to the pressure and volume of work. He accepts additional duties or change in work assignments or releases work when such adjustments are necessary for the over-all good of the department.

Patience and *self-control* should be demonstrated, with the employee able to remain calm even under adverse circumstances. He should be able to subordinate his personal feelings and be open-minded about opinions which do not coincide with his own.

Work Habits. Does the employee stay with a job until it is completed properly, always keeping in mind the welfare of hospital patients? Within the framework of established procedures, can he be depended on to perform his duties without follow-up by the supervisor? Does he show, through proper handling of tools and equipment, that he realizes he has been entrusted with expensive materials and thus treats them as he would his own property? Is the area he covers in carrying out his assigned duties kept neat at all times? Is it thoroughly cleaned when the work is completed? Does he know and observe high sanitation standards?

Work Interest. The employee should realize he is a part of an organization whose main function is to care for ill persons. Even though his part may be indirect, he should always be considerate of their problems and strive to do his part in helping the department meet them. He should be enthusiastic about the need for and the good that comes from his labors and continually try to do his job even better. Does he offer ideas and suggestions which would make for a better rounded service to patients? Is he willing to try new duties and does he keep an open mind until he knows what is expected? If it does seem unsuitable, or not to be an improvement, does he talk it over calmly and frankly with his supervisor?

Work Output. The employee should complete his share of work by being on schedule with all work assignments for which he is responsible, thus helping to maintain an even flow of work within the unit. Can he be depended on to turn out accurate work, check his own work for errors, and seldom repeat a mistake? Does he also achieve good results in those instances where he is responsible for more than detailed work?

Does the employee understand written and oral instructions well and can he apply instructions correctly and with ease? Also, he should carry out instructions faithfully by observing rules and policies, with or without supervision. He should be able to put new procedures to good use.

The employee should have a clear understanding of the duties and responsibilities occurring in his position. Has he gained mastery of the techniques and details? Does he know proper work methods and the place of his own job in relation to the unit and department?

When the immediate supervisors have completed their rating, they are asked to submit their results, using only one form. This, we believe, results in a better rating, conserves materials, and lessens the routine work of the person who reviews the ratings (usually the administrative dietitian who heads the unit and who is considered a representative of the department head). She indicates agreement or disagreement with the original rating and makes any comments that seem justified. In this way, a further check is imposed on the immediate supervisors. After this review, the forms are submitted to the director of dietetics for final review and action. For her convenience in making final decisions, a weighted numerical evaluation of the rating scale has been worked out as shown in Table 1. This weighted scale is not known to the raters and thus serves as a check against unconscious loading of a rating in favor of, or against, an employee, and provides further insurance of fairness to the employee.

TABLE 1

Weighted numerical scale for merit rating

GROUP	TOTAL VALUE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
	%					
Attendance	12	4–3–1–0	4–3–1–0	4–3–1–0		
Appearance	11	4–2–1–0	3–2–1–0	4–2–1–0		
Relationship	22	6–4–2–0	4–3–2–0	4–3–2–0	4–3–2–0	3–2–1–0
Work habits	16	3–2–1–0	4–3–2–0	4–3–2–0	5–4–2–0	
Work interest	19	6–4–3–0	5–3–2–0	3–2–1–0	5–4–2–0	
Work output	20	4–3–2–0	5–4–2–0	5–4–2–0	6–4–2–0	

A 100 per cent rating is theoretically possible only if an individual should be scored "A" or "Superior" on every factor. The "B" and "C" scores, or "Very Good" and "Satisfactory," are given for lesser values. When a factor is rated "Unsatisfactory," or "D," no value is given.

The illustration of the form shows the manner in which various factors are rated by the supervisors, then weighted by the head of the department. In the first factor shown, for instance, the "A" indicates a "superior" rating, while the "(4)," put there by the department head, gives the numerical value of that factor. The total numerical score for this particular rating is seen to be 73.

The head of the department has many checks of which she will soon become aware to enable her to keep the rating techniques up to standard. One might see, for example, where the median and third quartile ranges are for one pair of raters as compared with the department as a whole. Another is to compare each new rating with the one given the employee previously—always remembering, of course, that one should not expect any individual to remain static in his working environment.

Most employees receiving salary raises have scores above the third quartile. The score is not used as an infallible guide, however, because elasticity is needed to take care of exceptional cases. The space for "Remarks" comes into use then. Other than that, raters may indicate whether they recommend an increase in salary.

While satisfactory ratings result in increases in pay, unsatisfactory ratings are treated in several

ways. There is no possibility of a merit raise in pay for an employee with an unsatisfactory rating. On the other hand, if an employee shows any improvement, although still receiving an unsatisfactory score, the situation may be allowed to continue for several ratings without dismissal. We try to work with such people to fit them into the most suitable job for their interest and ability.

An employee is shown his rating if he requests it, and it is discussed with him at that time. In cases where the department head feels that an employee might benefit from such a discussion, she does not wait for him to request an interview, but rather makes a point of seeing him about his rating. This is deemed necessary because often the employees most likely to benefit from the discussion lack insight into their own shortcomings and show little or no interest in their merit reports.

We feel that our merit rating system is simple and workable. We have benefited from the countless trials and errors of others who have preceded us in this field since 1917, when merit rating scales were first developed. This is in addition to the refining processes through which we have put our own system to meet our own particular situation. Without doubt, this type of device helps to protect employees from snap judgments or the ill-will of one supervisor and enables them to make the most of their capabilities. It also helps to do away with the "squeaky hinge always getting the oil" and eliminates injustice to the unspectacular worker. Devices can be incorporated in the form itself to detect carelessness, lack of thinking through the understanding or misunderstanding of meanings, prejudice, or favoritism by the raters.

As we deal with different types of people, we find a common pattern repeating itself in good workers. If the interest in their work is present and their relations with fellow workers and the public are satisfactory, usually the work output is high also. More and more we have come to believe that by selecting new employees who show a good attitude in general, the quality and quantity of work performed measures up likewise. This has been helpful since reliable tests for food service workers have not yet been standardized.

Hints on Writing References

Dietitians are frequently asked to write references for their professional staff. Such references become part of a permanent professional record in a depository such as the Placement Service of The American Dietetic Association. Thus they are always available to be sent to prospective employers at the person's request.

They can also help in counseling concerning a new position.

An article in the May 1951 issue of *The American Journal of Nursing* points up the importance of writing the proper type of reference, which we may well paraphrase to apply to dietitians. It says:

"In evaluating a professional record, the counselor takes into consideration the composite picture which emerges after all the facts have been assembled. She notes whether there appears to be a continuous pattern of personal and professional growth throughout the dietitian's progressive experience. If all evaluations save one are favorable, she searches for reasons underlying this one unsatisfactory experience. If the same weakness is noted in the majority of the references, an effort is made to assist the dietitian to recognize the problem and to arrive at a decision leading to its solution. Your evaluation of the dietitian, therefore, is an important part of the total record.

"After you have written a summary of the qualifications, assets, and liabilities of the person who is being evaluated, you may wish to ask yourself:

"(a) *Are the statements accurate?* Are they accompanied by illustrative or substantiating information? Have you avoided the tendency to make broad sweeping statements and vague generalizations? Were the traits described evident throughout the dietitian's entire experience in your organization or has overemphasis been placed on isolated episodes? Are the statements based on personal knowledge or on hearsay?

"(b) *Is the evaluation objective?* Is it based on the conclusions of several persons qualified to judge fairly? Have these persons been influenced either favorably or unfavorably by their own emotional reactions to the person who is being rated? Has the evaluation been considered in relation to the situation in which the individual was placed? Perhaps she was expected to accept responsibilities for which she was unprepared because of lack of education, experience, or degree of maturity. Perhaps her duties were too routine and failed to offer stimulation or incentive. Perhaps there were tensions both from within and from without which made a satisfactory adjustment difficult. If so, some indication of these factors should be given.

"Remembering that your reference will become a part of the dietitian's permanent record, you may wish to withhold certain information which has significance only in the immediate situation and which you would not wish to have quoted in the future. This information may be valuable to the placement service counselor, however, and it may be recorded separately and marked 'Confidential, not for quoting.'"

Short Method of Dietary Analysis as Based on the New Data on Food Composition[1]

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IN DEVELOPING the short method of dietary analysis (1), the objective was to prepare a food composition table which, when used for dietary analysis or planning, would give results as accurate as those obtained by the usual method in which each food item is calculated separately, but which could, in addition, effect a considerable saving in time. The publication by the Bureau of Human Nutrition and Home Economics (2) of a food composition table which not only incorporated all new food composition data, but which also reported the caloric value of foods in terms of their physiologic fuel value, made advisable a revision of the food composition table for the short method in keeping with this newer information.

In the majority of food composition tables, the fuel value is based on Atwater's general values of 4 calories per gram for protein and carbohydrate and 9 calories per gram for fat. The recent incorporation of the physiologic fuel values in food composition tables (2, 3) seems to have resulted in some confusion as to the conditions under which each of these two systems may properly be employed.

A brief discussion of the differences between Atwater's general values of 4-9-4 and the physiologic fuel values will make it clear that the former are not suitable for calculating the energy value of individual foods or diets which differ markedly in composition from the average diet of the American people during the latter part of the nineteenth century. Atwater's work (4), on which his average values are based, was published in 1899. In his investigation, he first analyzed a great variety of foods for protein, fat, and carbohydrate, and from these data arrived at average composition figures for meats, cereals, vegetables, legumes, and so on. Although the analytic methods themselves have certain limitations, these do not need to concern us here. Using the bomb calorimeter, Atwater then determined the energy value per gram of pure protein, fat, and carbohydrate derived from these various food sources.

BOMB CALORIMETER VALUES

The results of these analyses showed that the fuel value of these nutrients varied with the food source. For example, the heat of combustion of 1 gm. protein from meat, fish, or milk was found to be 5.65 calories, that of 1 gm. protein from refined cereals was 5.80 calories, and of 1 gm. protein from vegetables, 5.00 calories. These differences in energy value are attributable to variations in the amino acid composition of the proteins.

Similarly, fats and carbohydrates from different food sources vary somewhat in their heats of combustion when burned in the bomb calorimeter. The fat of milk and milk products yields 9.25 calories per gram; that from meat, fish, and eggs, 9.50 calories; and that from cereals, fruits, and vegetables, 9.30 calories. Likewise, the heats of combustion of carbohydrates vary from 3.95 calories per gram for lactose and sucrose to 4.20 calories per gram for those obtained from cereals and vegetables.

PHYSIOLOGIC FUEL VALUES

Since some of the potential energy value of a food is lost due to incomplete digestion and absorption, it was next necessary to establish the digestibility of various foods. From studies on a large group of individuals, it was found that, on the average, 97 per cent of the protein from animal foods was digested and absorbed, whereas 85 per cent of that from refined cereals and 83 per cent from vegetables was utilized. Thus the available energy from 1 gm. animal protein was 97 per cent of 5.65 calories or 5.5 calories per gram, whereas for vegetable proteins the available energy was only 83 per cent of 5.0 calories or 4.15 calories per gram, a difference of more than 1 calorie per gram of protein.

Comparable differences in the digestibility of fats and carbohydrates from different food sources likewise alter the energy available from 1 gm. of these substances. To illustrate, it may be mentioned that

[1] Presented at the 34th Annual Meeting of The American Dietetic Association in Cleveland, on October 11, 1951.

the total energy value of sucrose is 98 per cent available, whereas that of the carbohydrates in fruits is only 90 per cent available, giving an energy value per gram for the former of 3.87 calories (.98 × 3.95 calories) and for the latter of 3.60 calories (.90 × 4.00 calories). Since fats and carbohydrates are completely metabolized by normal individuals, the energy value obtained after making a deduction for the amount lost due to incomplete digestion and absorption constitutes the *physiologic fuel value*.

The absorbed amino acids of the proteins, on the other hand, are not completely oxidized in the body, and some of the potential energy is lost in the nitrogenous waste products which are excreted in the urine. It has been determined that, on the average, this amounts to 1.25 calories per gram of ingested protein. Consequently, to establish the physiologic fuel value of different proteins, that is, the amount of energy which the body actually derives from 1 gm. food protein, it is necessary to make a further deduction of 1.25 calories per gram. This, then, gives a physiologic fuel value for 1 gm. protein from meat, fish, and milk of 4.25 calories; from refined cereals of 3.70 calories; and from vegetables of 2.90 calories. These values show the great differences between the physiologic fuel values of proteins from these various food sources and demonstrate the error inherent in using 4 calories per gram for all proteins when dealing with individual foods or special diets based on a limited variety of foods.

Atwater's general values of 4-9-4 are the means of the physiologic fuel values for the proteins, fats, and carbohydrates comprising the average American diet late in the nineteenth century. They, therefore, are suitable for computing the fuel value of such diets but are not appropriate for diets differing materially in general make-up from that diet (5).

VARIABILITY OF COMPOSITION OF INDIVIDUAL FOODS

The short method of dietary analysis is based on the development of mean values for food groups, the individual items of which are sufficiently similar in composition so that the use of these mean values in dietary analysis does not result in values significantly different from those obtained when the nutrient content of each food is calculated separately. The justification for establishing such food groups lies in the great variability in composition of individual foods. This variability may be illustrated by a consideration of the range of values for various nutrients in a few representative foods. According to Eckles, Combs, and Macy (6), the protein content of cottage cheese varies from 12.7 to 21.0 per cent; that of Swiss cheese (domestic) from 26.0 to 30.0 per cent; and that of Cheddar, from 20.8 to 26.1 per cent. The fat content shows similar variations, that for cottage cheese being from 0.4 to 1.9 per cent; for Swiss cheese from 30.0 to 34.0 per cent; and for Cheddar cheese, from 30.0 to 36.7 per cent. It is apparent that these ranges in values represent differences of 15 to 300 or more per cent.

Similar variations in carbohydrate content are also apparent. In so common a food as the white potato, the varieties frequently referred to as "boiling" potatoes may contain from 15 to 20 per cent of carbohydrates, whereas "baking" potatoes may contain as much as 20 to 30 per cent carbohydrate. The average carbohydrate content of potatoes is usually given as 19 per cent. Consequently, a serving of baking potatoes may contribute 10 to 15 gm. more starch than a serving of boiling potatoes. Nevertheless, in planning special diets, this fact is rarely taken into consideration, since most food composition tables list white potatoes without designation as to variety.

Variations in the mineral content of foods of as much as 100 to 200 per cent are perhaps the rule rather than the exception. Vegetables produced in different areas in Minnesota (7) which were analyzed for calcium, phosphorus, and iron showed differences in these minerals of as much as 100 per cent when grown in the same locality, with even greater variations when they were obtained from different localities.

Foods are even more variable in vitamin content. According to Sherman (8), the vitamin A content of tomatoes ranges from 500 to 1200 I.U. per 100 gm.; that of eggs, from 1000 to 2000 I.U., and that of oranges from 50 to 400 I.U. The average vitamin A content of tomatoes (2) is given as 1100 I.U., which is near the upper limit of Sherman's range; that of eggs is given as 1140 I.U., a value near the lower limit of the range given by Sherman; and that of oranges, as 190 I.U. which is almost midway between the two extremes. In calculating the nutritive value of a diet, the dietitian has no alternative but to use the average value, since she has no way of ascertaining whether the particular food being served is average in vitamin A content or is at either extreme of a rather wide range.

The same variations occur in other vitamins. For example, values as high as 45 to 50 mg. per 100 gm. raw potato have been reported for the ascorbic acid content of newly-harvested potatoes (9). Since potatoes lose this nutrient very rapidly, particularly during the early months of storage, the ascorbic acid content may have decreased to as low as 5 or 6 mg. per 100 gm. in certain varieties after a period of storage. The year-round average value (17 mg. per 100 gm. raw potato) is approximately one-third that of certain newly-harvested potatoes, and three times that found in some varieties after storage for a number of months.

FOOD GROUPS USED IN SHORT METHOD

In the long run, that is, over a period of months, the nutritive value of the foods served will probably average out somewhere near the value given in food

composition tables but, as far as a particular diet is concerned, the calculated value represents only an approximation of the actual nutrient content. This variability in food composition justifies the use of food groups in the short method of dietary analysis.

In arriving at the values for the food groups, each food was weighted in accordance with the most recent report on food consumption in the United States (10). Although Maynard (11) in 1944 found that the average American diet did not differ significantly from that reported by Atwater in 1899, large segments of our population have had more money to spend for food during and following World War II than previously, and this has resulted in a considerable change in the food habits of the American people as a whole. In weighting the foods for the short method, the last four years for which information was available (1945 to 1948, inclusive) were used. For example, it was noted that oranges constituted 55 per cent of the total amount of citrus fruits consumed in the United States; grapefruit, 19 per cent; lemons, 8 per cent; and citrus blends, 18 per cent. These percentages were used to weight the nutrient values for these foods in arriving at the average for citrus fruits.

In the food composition table, all figures were rounded to the least number of decimal places it was possible to use without resulting in a statistically significant difference between the values for the long and short methods of dietary calculation. Fats and carbohydrates, for example, could be rounded to the nearest whole number, proteins to the nearest half gram, calcium and phosphorus to the nearest hundredth gram, iron to the nearest tenth of a milligram, and so on.

As might be anticipated, the agreement between the long and short methods of dietary calculation is improved as the length of the observation period is increased. For example, a comparison based on seven-day dietary records shows smaller differences than one based on three-day or one-day records. Furthermore, there is closer agreement in the values obtained when the methods are applied to a varied diet. The repeated intake in a week of a specific food which differs somewhat in composition from the mean values of the group in which it is classified, results in an exaggeration of the difference between the two methods. For example, a serving of hamburger contains somewhat less protein than an average serving of beef. Since a serving of hamburger would be counted as one serving of beef in the short method, this would result in an apparently higher value judged by the short method than by the long method. This difference would be multiplied as the number of servings of hamburger is increased. Likewise, if in a week's dietary the only citrus fruit included is oranges, the short method will give a somewhat lower value for ascorbic acid than the long method, because the ascorbic acid value for citrus fruits in the short method is somewhat lower than that for oranges. However, even with these discrepancies, because of the great variation in the composition of foods, the short method undoubtedly gives as accurate a picture of the actual nutrient content of a diet as does the long method and, in addition, effects an appreciable saving in time.

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Gum Chewing and Dental Caries

The sugar content of commercial chewing gum is about 60 per cent by weight. In experimental studies, the level of reducing sugar in the saliva (normally about 20 mg. per 100 ml.) rose to an average of 725 mg. per 100 ml. after five minutes' chewing of a stick of commercial gum containing 500 mg. glucose. At the end of 30 min. the normal level was restored. It has been observed that in the presence of sugar the *pH* at the surface of the teeth in susceptible individuals falls below the level at which enamel is known to dissolve with rapidity. Further, experimental use of sugar-coated gum three times a day for ten days was associated with a tenfold increase in the salivary lactobacillus count, a widely accepted index of caries susceptibility. More direct evidence is not yet available.—*From: Queries and Minor Notes, J.A.M.A. 148: 1167 (March 29), 1952.*

Prevention of Chronic Illness

The Role of the Dietitian and Nutritionist[1]

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THROUGH the joint efforts of the practitioners of medicine, the official and voluntary health and welfare agencies, and the associated professional groups including public health nurses, medical social workers, nutritionists, and dietitians, communicable diseases have been brought under relatively good control and notable achievements have been made in promoting maternal and child health. As a result, the population has been aging, a fact well known to dietitians because of the challenges which such sociologic changes present to them as a professional group.

Life expectancy, which was only 48 years at the turn of the century, has now reached 67 years (Table 1). At the beginning of the nineteenth century, the median (the age that divides the population into two equal groups) was about 16 years. Seventy-five years later it had reached 21 years. By 1900, it was 23 years and in 1950, 30 years. Thus, it increased as much in the four decades after 1900 as in the eight preceding decades. In 1900, 17 per cent of our national population was 45 years of age or over. This figure had reached 28 per cent by 1950 and, by very conservative projection, it is estimated that by 1980, over 40 per cent of our population will exceed 45 years of age. Persons over 65 years of age, comprised 4.1 per cent of our population in 1900 and 7 per cent in 1950. It is expected that this group may reach as high as 10 per cent by 1980.

The control of the conditions which formerly took such a high toll during the earlier years of life has thus allowed a higher percentage of persons to reach those years during which the development of chronic illness is so much more frequent. This is indicated by a glance at the leading causes of death in 1900 and at the present time (Fig. 1). At the turn of the century, tuberculosis ranked first among the causes of death, pneumonia second, heart disease third, acute enteritis of children fourth, and nephritis fifth. Thus, three of the five leading causes of death were then attributable to infectious diseases. At the present time, the five leading causes of death are heart disease, cancer, intercranial vascular disorders such as hemorrhage or thrombosis, accidents, and diabetes, none of which are attributable to infectious diseases, but rather all are related to the development of degenerative tissue changes prevalent in the later years of life. This is true of accidents as well as of the other causes of death. Fatal accidents, particularly in the home, are most common among the older elements of the population and are often associated with the presence of physical or psychiatric disorders.

TABLE 1

Shifts in the age of the population of the United States

YEAR	LIFE EXPECTANCY	MEDIAN AGE	PROPORTION OF POPULATION	
			Over 45 years	Over 65 years
	yr.	*yr.*	%	%
1900	48	23	17	4
1950		30	28	7
Men	65			
Women	70			
1980 (prediction)	—	—	40	10

Chronic illness is not only accountable for the vast majority of deaths today but is also responsible for a considerable amount of disability (Table 2). It has been estimated that 25 million persons, or one in six of the population, have some form of chronic illness. Of these, 7 million have moderate to severe disabilities, and 1½ million are complete invalids. Among the more common disorders, heart disease affects more than 9 million; diabetes, 2 million, of whom only one-half are believed to have been diagnosed and under treatment; cancer, 600,000; arthritis, 800,000; and tuberculosis, 500,000.

These extended years of life have the potentiality of being a great boon to mankind, provided these

[1] Presented at the 34th Annual Meeting of The American Dietetic Association in Cleveland, on October 11, 1951.

TABLE 2

*Estimated prevalence of chronic illness in the United States**

DISEASE	NUMBER OF CASES
Heart disease	9,200,000
Diabetes	
Known	1,000,000
Unknown	1,000,000
Cancer	600,000
Arthritis	800,000
Cerebral palsy	175,000–350,000
Multiple sclerosis	50,000–100,000
Tuberculosis	500,000
Blindness	
Total	260,000
One eye	1,000,000
Very slight vision	340,000
Deafness (30 decibel loss or greater)	3,000,000
Speech disorder (5 to 19 year age group)	1,000,000
Epilepsy	500,000–1,000,000†
Amputees (major)	400,000
Total number with chronic disease	25,000,000
Total number with moderate to severe disability	7,000,000
Total number of complete invalids	1,500,000

* From estimates submitted by expert committees of Commission on Chronic Illness in preparation for Conference on Chronic Disease, Preventive Aspects, held in Chicago, March 12–14, 1951.

† 50,000 in institutions.

hordes of older persons can lead lives which are fruitful and satisfying to themselves and, at the same time, contribute greatly to human welfare on the basis of their accumulated experiences. Optimal health for all is, of course, most desirable, but even for those affected with chronic illness, the disability need not be an obstacle to this potentiality if the individuals, through their own inner drives or through treatment, education, and training, guide their activities by their capacities rather than by their defects.

Unfortunately, the common picture is that of chronic illness causing incapacity, exhaustion of funds through inability to continue work, and spending a great deal for medical care, general dependency, and frustration. Old age, chronic illness, and indigence too often comprise an unholy triumvirate which is plaguing our communities. Recent surveys have indicated that chronic illness was the determining factor in 65 to 80 per cent of the cases on the rolls of welfare agencies. The seriousness of this situation has been well stated by the Special Committee on Social Welfare of the New York State Joint Legislative Committee on Interstate Cooperation (1). "As their numbers increase, the burden of maintaining [the older, chronically ill persons] falls more heavily on the relatively diminishing number of productive workers, and unless the present rate of increase is checked, it may indeed become unmanageable. While the economic aspects of the problems are grave indeed, they are secondary in importance to the possible deterioration of individual and community morale which may take place unless a full-scale effort is made to turn back the tide of

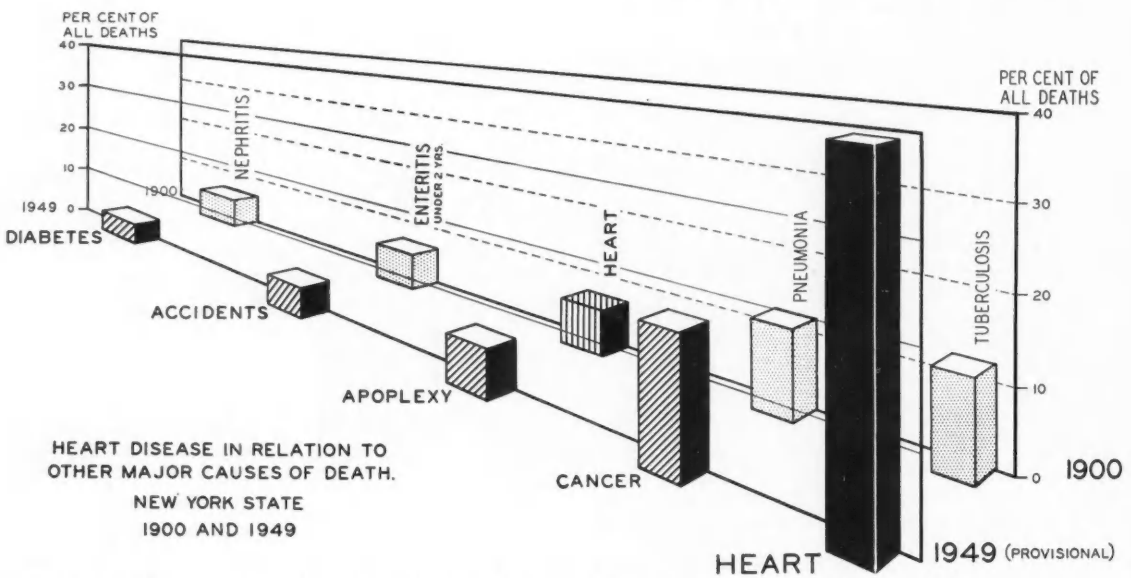

FIG. 1. *Leading causes of death in 1900 and today. (Reprinted by permission from* Health News, *published by N. Y. State Department of Health, Vol. 27, No. 7, 1950.)*

dependency at its source, through the fullest possible use of preventive and rehabilitative services."

Thus chronic illness must be recognized as the major public health problem of the day, meeting in full the U. S. Public Health Service's criteria of being a condition which is widespread, serious, costly, and one with which an individual alone cannot cope.

It is necessary that each professional group carefully analyze the situation to evaluate how this changing medical situation has affected its own activities, and what emphasis must be placed on these activities to affect favorably the general situation. Among the various professional groups, those involved in the fields of dietetics and nutrition have a most important part to play.

The recognition of the importance of food intake in the management of disease goes back to the beginning of medicine. Hippocrates stated in one of his essays: "For the art of Medicine would not have been invented at first, nor would it have been made a subject of investigation . . . if when men are indisposed, the same food and other articles of regimen which they eat and drink when in good health were proper for them, and if no others were preferable to these." How then can the dietitian or the nutritionist join forces with the health officer in the general attempt to stay the ravages of chronic illness?

PRIMARY PREVENTION OF CHRONIC ILLNESS

The primary objective of any health program is prevention. Under ideal conditions, we like to think in terms of primary prevention, that is, the absolute avoidance of the development of a disease. Our experiences with communicable diseases and with maternal and child health have been rich with fruitful results. Through environmental sanitation, immunization, isolation and quarantine, and maternal and child health supervision, we have been able to reduce drastically the incidence of many diseases, disorders, and deaths. Unfortunately, because of the lack of known causes associated with most of the chronic illnesses, our chances for success in this field are relatively limited.

Therefore, we must depend to a greater degree on secondary prevention, which, for the purpose of this discussion, may be interpreted as having a very broad implication. Secondary prevention implies the arrest or retardation of a disease process at the earliest possible stage so that the residual disability will be minimized. It will be our purpose to determine how nutrition can play a role in both primary and secondary prevention of chronic illness.

Primary prevention of chronic illness, through nutritional control, has both general and specific aspects. The former involves the promotion of an optimal state of health. The World Health Organization has defined health as not merely the absence of disease but a positive state of mental, physical, and social well-being. The promotion of health, in this broad sense, among large elements of the population calls for intensive and extensive programs in mental health, social adjustment, and nutrition. Promising as the first two items may be in the light of relatively recent advancements, it is in the field of nutrition that we have the greatest potentiality for success, for nutrition is a tangible science, readily applicable, with predictable results.

OBESITY

For a general approach, nutrition in primary prevention may be considered from three viewpoints. First, there is the very great problem of obesity. In this unusual land of ours, obesity is more of a problem among the middle-aged and elderly than is undernutrition. It is not only a serious deterrent to a sense of well-being, but is an aggravating factor in the development or manifestation of such disorders as heart disease, hypertension, diabetes, arthritis, and accident-proneness. The symptoms and serious effects of these diseases may sometimes be delayed or even avoided by adequate weight control, and some of the milder forms can be brought under control by weight reduction. The promotion of obesity control through public health education and through direct assistance to patients and physicians by public health nurses and nutritionists is an essential part of chronic disease prevention.

Second, excessive degrees of underweight may seriously increase the risk to chronic illness. It is true that undernutrition may be protective from some of the diseases referred to above, and indeed, laboratory experiments by McCay, Sterling, and Barnes (2) have indicated that rats on diets which contained a minimum of calories, but which were otherwise qualitatively sufficient, showed a definitely increased longevity compared to rats on complete diets. The applicability of this to the human race has, of course, not yet been demonstrated. On the other hand, undernutrition may predispose to pulmonary tuberculosis and other chronic lung diseases and may also precipitate disturbances of the endocrine and nervous systems.

DEFICIENCIES

Full-blown vitamin deficiencies are rarely seen today, but mild subclinical deficiencies have been widely reported by several reliable authors. To these we must add the role of mineral deficiencies, particularly that of iodine. The extent of these subclinical deficiencies on a nationwide basis is difficult to estimate. The important thing is that they are preventable through educational efforts directed at the adequate intake of required food.

Probably the greatest problem in this field occurs among persons on public assistance. The allowances for public assistance have kept pace in few areas with the inflationary rises in food costs. Unless these

persons are given detailed instructions and help in the purchase of foods containing all necessary ingredients, the chances of their developing subclinical deficiencies from a poor choice of foods are relatively great.

Third, the maintenance of optimal health on a continuing basis will permit early detection of incipient disease. Chronic disease is characterized by a slow, insidious onset, and it is often well advanced before definite clinical symptoms appear. Overweight or underweight persons, never feeling up to par, would be less apt to note the development of symptoms such as lassitude, loss of appetite, sleeplessness, and weight changes than those who hitherto had been maintaining optimal health.

SPECIFIC APPLICATION OF PRIMARY PREVENTIVE MEASURES

Sodium and Hypertension

Instances in which dietary measures can prevent chronic illness are limited, and even in these few instances, the evidence is still partially controversial. During the past few years, dietary therapy has made definite inroads in the control of hypertension. Although the rice diet was first considered to have some special properties conducive to reduction of blood pressure, and indeed is still being used with considerable success in North Carolina and elsewhere, it is now the general opinion that any diet with a sodium content of less than 500 mg. will result in a lowered blood pressure in many hypertensive patients. Such diets are not easily devised and prepared, and it takes skill to make them reasonably palatable.

It is sometimes important to check the sodium content of the drinking water. Fortunately, most natural waters do not contain appreciable concentrations of sodium. However, according to a report by Dr. Seymour L. Cole (3), the sodium content of the water becomes important when it reaches 10 mg. per 100 cc. Dr. Cole referred to the experiences of the Los Angeles County Hospital where the drinking water was found to contain 20 mg. per 100 cc. Patients on the Kempner rice diet, although receiving only 200 mg. sodium in the diet itself, ingested an extra 400 mg. daily from water.

Dietary control of hypertension might be looked upon as a secondary form of prevention, because it is applied to an established disorder in an attempt to arrest its progress. However, it is a primary form of prevention with regard to hypertensive heart disease and the other complications of long-standing blood pressure elevation.

CHOLESTEROL AND CORONARY HEART DISEASE

All persons interested in heart disease have been fascinated by the recent developments regarding relations between atherosclerosis and cholesterol metabolism. You are all familiar with the early investigations showing the development of arterial hardening in rabbits given large doses of animal cholesterol. Because rabbits are herbivorous animals, they are not prepared to digest and metabolize this fatty material, and this may explain the development of atherosclerotic lesions on such a regimen. Dogs given corresponding amounts of cholesterol do not show unusual degrees of atherosclerosis. However, if given excessively large amounts of cholesterol and thiouracil at the same time, atherosclerotic lesions do develop. These bear a striking resemblance to those seen in man. Although the dog, a carnivorous animal, is apparently well equipped to manage large amounts of animal cholesterol under normal circumstances, the depression of his metabolism caused by thiouracil, plus the presence of an increased intake of cholesterol, is too much for him. In man, the occurrence of high blood cholesterol levels and an abnormally high incidence of atherosclerosis associated with hypothyroid states is well known.

These animal studies served to stimulate investigations regarding the relationships of coronary heart disease in man to blood cholesterol levels and to cholesterol and other fat intake. Although the relation between coronary heart disease and high blood cholesterol levels has been fairly well established, the association of either of these with a high cholesterol intake is certainly controversial, if not disproved. Recent developments have indicated that the level of blood cholesterol is not as important as the presence of abnormally large, low-density, lipoprotein particles, as detected by the use of the ultracentrifuge. There are also indications that the ratio of blood cholesterol to blood phospholipid has more significance than the actual blood elevation of cholesterol.

The practical side of these developments has been that rigid restriction of fat intake is effective in reducing not only the total blood cholesterol but the percentage of the abnormally large particles in the blood stream. Whether this strict dietary regimen, with the consequent physio-chemical changes in the blood, will have a role in preventing subsequent attacks of coronary thrombosis remains to be seen. Some physicians have placed patients with angina pectoris on very low fat diets and have reported diminution in the frequency of attacks. If further substantiation to these findings can be achieved, it may be possible to determine, through periodic examination of large segments of the population or through examination of siblings of atherosclerotic patients, those individuals who have abnormal physio-chemical properties of the blood but who have not as yet shown clinical manifestations of atherosclerosis. Possibly, dietary management might prevent or delay the development of clinical symptoms by arresting the atherosclerotic process.

The problems of hypertension and atherosclerosis

are so extensive that any mechanism which will have a preventive effect in even a small percentage of susceptible persons will influence the life history of a great number of people. These approaches may eventually prove to be ineffective, but so much new information has been uncovered during recent years that we are justified in having confidence in the future. It seems certain that dietary management will have a place in the preventive approach.

It has been reliably recorded that during the siege of Leningrad in World War II and in Palestine during the Israeli-Arab conflict—both periods of semi-starvation—there were definite drops in the incidence of cardiovascular episodes, in spite of continuous excitement due to shooting and bombardment day and night.

Williams (4) has recently discussed the concepts of genetotrophic disease. He considers a genetotrophic disease as one which occurs if a diet fails to provide a sufficient supply of one or more nutrients required in unusually large amounts because of the characteristic genetic pattern of the individual concerned. He believes this to be the basis for many diseases, the causation of which is now obscure. This group might include chronic alcoholism, familial rheumatoid arthritis, multiple sclerosis, and possibly diabetes and schizophrenia. If this concept is firmly established for even one disease, dietary management would have the potentiality for preventing chronic illness in a large number of persons.

SECONDARY PREVENTION OF DISEASE

The arrest or retardation of a disease through dietary management may be considered under the headings of direct and indirect effects. By direct effect, we mean that dietary therapy is a specific treatment for the disease, even though the disorder was not primarily caused by an over- or under-supply of any nutrient. Under this heading we can consider diabetes, peptic ulcer, certain forms of hypertension, and possibly arteriosclerosis and gout.

An indirect approach to secondary prevention of chronic illness is through the prevention or correction of associated nutritional deficiencies. It is a form of supportive therapy. For the most part, it consists of dietary supplementation to correct deficiencies associated with decreased availability of nutrients. The latter may follow anorexia related to the disease; decreased absorption of nutrients resulting from physiologic or mechanical disturbances; loss of protein metabolites through draining wounds, excessive excretion of albumin in the urine, or massive transudation in the peritoneum; poor utilization of nutrients because of metabolic and endocrine disturbance; or greatly increased need. In many instances of chronic illness, the maintenance of adequate nutrition in the face of these adverse factors may be the difference between a successful and an unsuccessful result in maintaining the patient until the disease process has been controlled. A high caloric diet is often not sufficient. It is necessary to find out exactly what the nutritional needs of the patient are in terms of carbohydrates, fats, proteins, minerals, and vitamins. It is necessary for the dietitian to receive from the physician sufficient details of the clinical condition and the nutritional needs of the patient to formulate a diet which will truly meet his specific requirements.

In many instances it is difficult to determine where acute illness ends and chronic disability begins. Adequate therapy during the acute phases of illness may be a factor in preventing chronic disability. A striking example of this is hepatitis of the infectious or homologous serum type. Here, the application of a diet high in protein and carbohydrate and low in fats appears to be supportive to the liver during the stage of acute infection and to minimize the chances of prolonged disability through scarring of the liver and subsequent cirrhosis. Actually, once cirrhosis has developed, a high-protein diet gives symptomatic relief and does seem to retard the course. However, if this condition can be prevented through adequate treatment during the acute stage of hepatitis, we are that much ahead.

NUTRITION IN REHABILITATION

The nutritionist's role in secondary prevention extends into the field of rehabilitation. If chronic disease is not to become a scourge on our daily existence and nullify the gains we have made in the extension of the years of life, all disabled persons must be restored to a life of optimal fruitfulness within the limits of their residual functional ability. It is necessary to teach disabled persons to live in accord with their capacities rather than their disabilities.

While the major objective of rehabilitation is to return a person to employment, it is a major accomplishment when a hitherto bedridden person is able to get into a wheelchair or ambulate around the house, no longer requiring full-time personal attention. There is a vast difference between a person who is bedridden and simply vegetating and one who has been trained to take care of his personal needs. Self-respect and human dignity are important factors. From the economic viewpoint also, the strain upon a household is greatly reduced when a patient can do a few things for himself. If the patient is subsequently to be institutionalized, the cost to the state or other supporting agency will be reduced in proportion to the ability of the patients to do something for themselves.

Because of the return of appetites when disease processes have quieted down and because of the sedentary existence of disabled persons, it is likely that the problem of obesity will be encountered more frequently than that of undernutrition. In either instance, it is necessary to restore the person to an

optimal state of nutrition. Excess weight or weakness attributable to inanition will be a serious detriment in training a person to use crutches or in the application of bracing to support ambulation. Indeed, the nutritional status may be the deciding factor in whether a person is or is not able to get out of bed by himself and take care of his personal needs.

Adequate dietary control plays an important part in the healing of wounds. This is of utmost concern to our military medical services, which have the essential function of restoring patients to active duty as rapidly as possible. According to a recent booklet issued by the National Research Council (5), "patients with nutritional deficiencies, whether induced by injury. . .or by inadequate diet, require longer time for convalescence than those whose nutrition has been maintained. The duration of disability which follows surgery, injuries, or disease has been significantly shortened by providing adequate nutrition."

SUMMARY

The control of communicable diseases and the promotion of better maternal and child health have allowed a higher percentage of persons to reach the later years of life during which chronic illness is so frequent. Were it not for chronic disease, the extended years of life would be a great boon to mankind, and we would be the beneficiaries of many scientific and cultural contributions by these older persons who have accumulated so much rich experience. Unfortunately, chronic illness has been cutting down the productivity of these older persons and making them dependent on the younger members of the population.

The nutritionist must take her place among other professional groups in the fight to prevent chronic disease wherever possible and to minimize the disabling effects when illness has become established. Nutritional control is probably more important than any other one factor in the maintenance of a positive state of health. The latter not only allows the individual to enjoy a state of well-being, but puts him in a position to detect any incipient disorder at the earliest possible moment. On the other hand, obesity and undernutrition not only preclude a sense of well-being but may be predisposing factors in the development or manifestation of chronic illness.

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Pakistan's Water Buffalo Gives Milk

"Pakistan's cow" is the name given to the national water buffalo, which most Occidentals picture as a draft animal. When dairy-less areas in Pakistan became heavily populated by World War II troops, the military dairy farms in Okara found it imperative to produce canned milk, butter, and cheese. Herds needed to be expanded, and there was no time to import cattle or breed scientifically to improve cows. Cows, in fact, were ruled out as dairy animals, because only cows of medium-low milk yield were available.

Milk yields of buffalo, it was discovered, in many cases equaled those of the best cows, and in some cases were greater. Moreover, buffalo milk contains a high percentage of butterfat. This seemed to offer a solution, but religious prejudice was an important obstacle, since Hindus are devout in their veneration of cattle. Foreign experts raised another objection: canning, they said, was impossible.

Nevertheless, a small evaporation plant was ordered. Processing began, but the resultant buffalo milk was, in the words of the experimenters, "a perfect mess." Butterfat content had not been taken into consideration. Buffalo milk contains 7.5 per cent butterfat; cow's milk, 4.6 per cent. Therefore, separated milk was added. Coagulation, however, was still taking place. It was then decided that buffaloes which had recently calved should not be milked, but rather only those thirty or more days in lactation. This practice resulted in improved milk, but it was still decidedly coagulated. Several additives were tried unsuccessfully at this stage. Success was finally achieved with the addition of sodium biphosphate and hydrochloric acid before evaporation.

Five thousand buffaloes are now being used as "cows" in Pakistan. Difficulties of breeding heifers, together with the fact that they calve at a later age than young cows, are offset by the longer useful life of the buffalo—seventeen or eighteen years.—*Abstracted from: The buffalo is Pakistan's cow. The Butter, Cheese and Milk Products Journal 43: 24 (April), 1952.*

Measuring Outcomes of Instruction[1]

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A TEACHER of dietetics—or any other field of study—must necessarily assume certain responsibilities for determining how effectively students have attained competency in the field of study. The essential concept which underlies such a determination is that evaluation consists of finding out to what extent the objectives are being achieved.

Once the teacher has fully realized the significance of this concept, she is in a position to judge the relevancy or importance of certain frequently stated rules or opinions concerning use of grading systems and the construction and use of certain types of tests. It also becomes possible to make practical use of the objectives which may have been laboriously constructed in education courses or through the efforts of committees.

Although the statement of objectives is a curricular problem, it must be mentioned here because this step must be taken before anything can be satisfactorily accomplished in a program of evaluation. There are several important characteristics of objectives which are to be useful in an evaluation program. They should be stated in terms of changes which are expected to be effected in the behavior of students, and they should be stated briefly and with sufficient specificity. There should be a small number of objectives which have been carefully considered and clearly stated. You will find that these objectives may usually be classified as understandings, skills, and attitudes. All unnecessary words and phraseology should be pruned away.

USE OF CROSSHATCH

The use of a crosshatch as a means of analyzing objectives of a course is a technique developed by Tyler (1). It is also illustrated in *Clinical Instruction* (2). This device enables one to see quite clearly what an objective implies in terms of content to be taught, and in such an analysis, it is possible to detect the overlapping inherent in a given set of objectives. The crosshatch provides a specification for the teaching and also a specification or blueprint for the evaluation. One may actually use a crosshatch test by asking students to fill in blanks and to note the errors.

If the wording of an objective is too complex for the objective to be analyzed by a two-dimensional device showing relationship between behavior and content, the objective is too complicated for it to function in the actual planning of instruction and in the process of evaluating the outcomes of instruction.

In the various cells of the crosshatch, the instructor fills in the details to be stressed in the teaching, and on which the testing is to be based, as far as that particular objective is concerned. For instance, for the first cell in the column on eggs, one might indicate that the students will be expected to know that there is no difference in food value between fresh and cold storage eggs or between brown and white eggs. In the next cell, one might note the important points concerning the storing of dried eggs, frozen eggs, and all other eggs. In the next cell below, there would be such points as that the cooking temperature should be below the boiling point, and the cooking period only long enough to coagulate the protein for palatable texture or for the desired thickness. There are other points to be listed in that same cell. This explanation will indicate to you the use of a crosshatch for relating the student behavior implied by a given objective to the content to be taught.

CHANGES IN NURSING PRACTICE

As an aside, we should mention the indications that a change of emphasis is needed in diet therapy instruction if such instruction is to prepare nurses adequately for the work they will do. Predictions have been made that private duty nursing will be entirely replaced in hospitals by a more adequate provision of staff nurses. With the growing trend in this country to provide more and more hospital beds and to hospitalize patients for minor illnesses, private duty nursing in homes is decreasing very rapidly.

As you are well aware, the nurse who expects to engage in hospital practice has little need for skill in cookery. She could, however, make important use of an understanding of the normal diet and its modification to meet needs in various disease conditions. Likewise, she could extend the services of professional

[1] Based on a paper read at the 34th Annual Meeting of The American Dietetic Association in Cleveland, on October 10, 1951.

OBJECTIVE: AN UNDERSTANDING OF THE MOST IMPORTANT FACTORS IN THE PURCHASE, STORING, PREPARATION, AND SERVING OF FOODS FREQUENTLY USED IN DIETS FOR ILL PERSONS

DESIRED BEHAVIOR OF THE STUDENT NURSE	MILK	EGGS	FRESH FRUITS	OTHER FOODS
Ability to select foods of the maximum food value				
Knowledge of how to store the food to retain the food value				
Ability to prepare simple dishes				
Ability to judge the food product				
Knowledge of the important points in the serving of these dishes				

Skeleton of a portion of a crosshatch to show the relation of an objective to the content.

dietitians if she had skill in teaching individuals or groups of patients. It would seem that much of the time devoted to teaching cookery in nursing programs should be used for teaching the nurse the abilities she actually needs. The public health nurse also needs the knowledge and teaching skills mentioned and, in addition, a thorough grounding in the essentials of planning the food budget.

You are, perhaps, aware of the trend in basic collegiate nursing programs to prepare students so that, on graduation, they are qualified to do staff nursing in either the hospital or a public health nursing agency. This trend should be recognized in the curriculum planning in nutrition and diet therapy.

APPLICATION OF PRINCIPLES

Now let us return to our topic, which was a consideration of some of the devices used in evaluation. The first one we have considered was the crosshatch. The next tests the student's ability to apply principles.

In *Clinical Instruction*, the author states (2):

"The chief uses which students make of principles are (1) to explain why something happened and discuss the answer in detail, and (2) to predict what will probably happen and justify the prediction or explanation with reasonable arguments.

"It is obvious that the first step in constructing a test exercise on the application of principles is to select principles, generalizations, concepts, and definitions to be tested. . .

"The next step is to consider the application of these general principles to the various units. . .

"The third step is to select situations, new to the student, which will provide her an opportunity to apply the principles."

An example of a test exercise on the application of principles follows. Other examples of such test exercises and a discussion of the interpretation of test results are given in *Clinical Instruction* (2), pages 430–37.

Test exercise to determine understanding of good practice in preparing beverages*

Directions: In the left hand column, various practices are listed. Place an X in the appropriate column to indicate whether the practice is good or poor. Check the column for "poor practice" if any part of the statement indicates an undesirable practice. In the fourth column, write the number of the principle listed below which applies, and from which you decided whether the practice was good or poor.

PRACTICES IN PREPARING BEVERAGES†	GOOD PRACTICE	POOR PRACTICE	PRINCIPLE INVOLVED
Beat egg before mixing with milk for an eggnog.	X		10
Coffee and tea should be brewed only as long as necessary to obtain the desired strength.	X		1
In preparing cocoa, mix the cocoa with sugar, salt, and hot liquid.		X	4
Leave chocolate or cocoa beverage uncovered while waiting to serve it.		X	5

* This exercise was suggested by the list of principles and practices on pages 246–47 of *A Manual for Teaching Dietetics to Student Nurses* (3). Similar tests might be constructed from the lists on pages 258–59, 269–70, 282–84, 295–97, and 322–23.

† This list could be extended to a reasonable number of practices.

Scientific facts and principles

1. The essential oils are volatile; therefore, their rate of loss is proportional to the temperature applied and to the length of the heating period.
2. Tea and coffee react chemically with metals.
3. Prolonged boiling or standing in contact with the air drives some of the free oxygen out of water and gives it a flat taste.
4. When hot water comes in contact with starch, the starch swells suddenly and the mixture becomes lumpy.
5. When milk is heated without agitation or without being covered, a scum develops which consists chiefly of calcium caseinate.
6. Chocolate scorches very easily because of its sugar and fat content.
7. Milk with a high fat content forms a scum at a lower temperature when it is heated and exposed to the air than does milk with a lower percentage of fat.
8. The melting point of cocoa butter is low.
9. Starch is practically insoluble in cold liquids. It forms a colloidal solution with hot water.
10. Egg blends with milk without large globules of egg floating when it has been emulsified by beating some air into it.
11. Lactose caramelizes readily.

THE MASTER LIST

The master-list device was introduced by Tyler in 1934 (4) to eliminate the disadvantages of the matching test. It has been shown to be a highly economical test device in that it permits the student to react to a wide variety of test situations in a short time. It is discussed as it can be applied to teaching student nurses in *Clinical Instruction* (2), pages 464–69.

As shown below, the first part of the master-list is a comprehensive list of the significant terms. The second part contains the test items themselves and consists of a series of definitions or descriptions.

It is generally best to arrange the list alphabetically unless some other arrangement is more suitable for enabling the student to indicate his competence in a minimum of time spent.

Master-list test exercise on characteristics of vitamins

Directions: Select from the list of characteristics in the left-hand column, those which apply to each of the vitamins listed in the right-hand column. After each vitamin in the right-hand column, place the correct number or numbers.

Characteristics of Vitamins	Vitamins
1. Considerable loss on drying and storing	Vitamin A: 5, 7, 9
2. Destructible in alkaline medium	Thiamine: 2, 3, 6, 10
3. Destructible by heat	
4. Deteriorates on exposure to light	Riboflavin: 2, 4, 6, 7, 10
5. Fat-soluble	
6. Water-soluble	
7. Stable to heat	Niacin: 6, 7, 10
8. Readily destructible on exposure to oxygen	
9. Stored in the liver to an appreciable extent	Ascorbic acid: 1, 2, 6, 8, 10
10. Not stored in the body to any appreciable extent	Vitamin D: 5, 9

OTHER EVALUATION DEVICES

The crosshatch type of test exercise and the master-list device were chosen for consideration because they are not as widely known as certain other types of test exercises, yet have a high degree of usefulness. It must be recognized that there is no one best method of evaluation, nor is there any one best type of test device. The selection must always be made in terms of the objective being measured.

Any satisfactory program of evaluation includes a variety of instruments. Applied to the problems of evaluating clinical practice, this suggests that we might, in any given situation, use a number of devices; for example, pre- and post-experience tests, anecdotal records, check lists, rating scales, samples of work done by students, personal conferences, and the student's own evaluation of her work.

CHARACTERISTICS OF A GOOD EXAMINATION

A testing situation should give students the opportunity to demonstrate the ability which it is intended to measure. For example, if it is intended to appraise the student's judgment, we must be sure we do that, rather than her ability to recall what the teacher or the textbook said.

Teachers of English feel that one of their best indices as to how effective their teaching has really been in developing an appreciation of literature is the selection of reading matter students make when the student is at liberty to determine his own choice. Similarly, the effectiveness of dietary instruction might be judged by the habits students demonstrate in their selection of foods.

This might be judged by their filling out questionnaires or check lists, if one can assume the results to be accurate. One might also make observations of the foods chosen from a cafeteria line and then note what has actually been eaten. Perhaps a difficulty in this method of evaluating teaching is that we are, in this last example, limiting the choices. The dietaries served to hospital personnel are usually well balanced.

However, the point illustrated is that one of the objectives of instruction in nutrition is to effect desirable behavior patterns in students with respect to selection of a diet. We cannot know whether this objective has been attained until we have data concerning their behavior before and after the instruction.

Such extraneous factors should be eliminated as would affect the validity of the test. Validity is the most important characteristic of a good examination. An examination is valid if it measures what it is intended to measure.

If the testing situation is one in which the student's practice is being observed and she is being judged on her ability to do a certain procedure, the situation should have been so controlled by the preparation

the instructor has made for the testing situation that extraneous factors do not affect the student's performance.

The testing instrument should measure the student's ability with the desired degree of specificity. A test question which does not give sufficient detail to require discrimination is inadequate. On the other hand, a testing instrument should not be used which measures a response in finer units than necessary, and the questions should not call for more detailed information than the student can actually use in practice. This principle is commonly violated in test questions concerning laboratory findings. In making questions of this nature, one must ask herself what use the practitioner actually makes of laboratory findings, which ones she actually needs to remember exactly, which ones she needs merely to recognize as deviations from normal, and what action, if any, she should take if she recognizes one to be abnormal.

The decision as to whether a student has had adequate experience in a given area should be made in terms of excellence of performance and quality of experience, not in terms of time spent and number of times she has had a given experience. Records of clinical practice should reflect the objectives of the practice and give evidence of the extent to which students have achieved the objectives.

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BIOGRAPHICAL NOTES FROM THE HISTORY OF NUTRITION

Henry Prentiss Armsby—September 21, 1853—October 19, 1921

The science of human nutrition has gained much from the fine research work carried out on farm animals. In the field of animal nutrition, the name of Henry Prentiss Armsby stands out as a great leader, not only in this country, but also throughout the world. He was a pioneer in this field of research and so thorough and painstaking were his investigations, so careful was his thinking and planning that his books are today classics in the field. His respiration calorimeter for direct and indirect calorimetric measurements on large domestic animals, which he built at Pennsylvania State College, remains the only one of its kind. During his lifetime, the Institute of Animal Nutrition was the mecca, not only for scientists in animal nutrition but for all those visitors to this country who were studying human nutrition.

Henry Prentiss Armsby was born September 21, 1853 in Northbridge, Massachusetts, the son of a cabinet maker. As a boy he was intensely interested in chemical experiments. He received his B.S. degree in 1871. A year later, he did graduate work at Yale under Professor S. W. Johnson and published his first papers on nitrogen in the soil. He went to Leipzig, Germany, and there, under Gustav Kuhn, he became interested in physiology. On returning to this country, he taught chemistry at Rutgers College (1876–77) and then was appointed chemist in Connecticut at the first Agricultural Experiment Station in the United States. There he became interested in the need for information on cattle feeding, publishing a manual in 1880 and other papers on chemistry of soil and milk. In 1883 he became Professor of Agricultural Chemistry and Associate Director of the Agricultural Experiment Station at the University of Wisconsin where he remained until 1887.

That year, he became Director of the Agricultural Experiment Station of Pennsylvania State College, where his real life's work was accomplished. In 1907, he became Director of the newly organized Institute of Animal Nutrition at Pennsylvania State College and built his respiration calorimeter.

Armsby was devoted to his work, and all of it was characterized by concentrated thinking. His research studies and knowledge made him the recognized leader of his day, and he was continuously in demand for consultation and surveys by the government, other institutes, and experiment stations. He was known for his ability as a chemist, physiologist, author, critic, administrator, and organizer. His writings include 115 papers and 4 books.

Armsby was so absorbed in his work that many thought him reserved and unapproachable. However, to his friends he was a beloved personality with a rich store of anecdotes and dry humor. To all he was courteous, dignified, and modest.

REFERENCE: Benedict, F. G.: Biographical memoir of Henry Prentiss Armsby. *In* Biographical Memoirs—8th memoir 19: 271, 1938 (National Academy of Sciences, Washington, D. C.).—*Contributed by E. Neige Todhunter, Ph.D., Head, Department of Foods and Nutrition, University of Alabama, Tuscaloosa.*

Editorial

REPORT TO THE MEMBERS OF THE AMERICAN DIETETIC ASSOCIATION ON THE INTERNATIONAL CONGRESS OF DIETETICS

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The First International Congress of Dietetics convened on July 7 at the Royal Tropical Institute, Amsterdam, and continued throughout that week. Representing The American Dietetic Association at this meeting was a privilege that will long be remembered. Hostesses for the Congress were the members of the Netherlands Dietetic Association, assisted by an Honorary Board and Executive and Advisory Committees whose membership included a distinguished group of Dutch scientists. The setting for the Congress was delightful; the Royal Institute provided not only a large and well-equipped meeting room but also a restaurant and the commodious and beautiful foyer which served admirably for registration, morning and afternoon coffee, and a place to meet and visit with old and new friends and colleagues. At odd moments, many guests enjoyed the exhibits of the tropical museum which occupied one wing of the building.

Names of 291 persons were published on the official preregistration list of the Congress, but it was estimated that, including the joint meeting with the International Congress on Diabetes, almost 600 persons attended during the course of the week. Thirty-five members of The American Dietetic Association were registered. Thirty-one nations sent representatives; twelve national dietetic associations were represented officially by one or more delegates. The latter group of official representatives acted as a committee in developing policies for future international meetings, and elected five members representing five countries to act as an ad hoc interim committee for the purpose of maintaining contact between the organized national dietetic associations. The countries represented on the committee were: the Netherlands, Great Britain, Sweden, Italy, and the United States.

The Congress program was interesting and varied. Each morning, as well as Wednesday afternoon, was devoted to lectures on recent findings in nutrition. During the other four afternoons, discussions were held of the dietitian and her training, problems, and types of positions. These discussions will form the basis for an article to be published in a succeeding issue of the JOURNAL.

Members of the American and Canadian Dietetic Associations, as administrative officers in the hospital, are in a unique position. In most countries the hospital dietitian devotes her time to therapeutic diets and, in a number of countries, leaders in dietetics are doctors of medicine. Excluding the group who were attending the Diabetic Congress, it was estimated that from 20 to 30 per cent of the members of the Dietetic Congress were trained in medicine—a fact which explains, in part at least, the emphasis on therapeutic dietetics over most of the world. The predominance of the therapeutic dietitian has a further significance, which from the American viewpoint represents a fundamental difference in the philosophy of the dietitian; i.e., over most of the world, a therapeutic diet is a "special diet" and not a modification of the normal diet to meet the emergencies of disease.

Another unique aspect of the American and Canadian dietitian involves the many types of positions open to her outside of the hospital, and the fact that a growing number of dietitians take postgraduate training to qualify for advancement in the hospitals and for obtaining many of the positions in the public health and educational fields. Over much of the world, dietetics is a terminal training which does not logically lead into advanced academic programs. This in itself limits the opportunities open to the dietitian, although programs related to public health are developing over much of the world, in which the dietitian is finding a place.

No account of the Congress would be complete without a word about the many "extracurricular" activities which the delegates enjoyed. The first day's meetings closed with a trip over the charming canals and harbor of Amsterdam, for which the delegates were guests of the Netherlands Dietetic Association. On Wednesday night, the members of the Congress were guests at a reception held in the historic Rijksmuseum. Their hosts were the Ministers of Social Affairs and Public Health, Education, and Agriculture, and the mayor and aldermen of Amsterdam. The museum galleries were open, giving the guests an opportunity to enjoy the magnificant collection of paintings by Rembrandt and his contemporaries. The Congress closed with an official banquet held at Grand Hotel Gooiland in the garden town of Hilversum.

Many other nonofficial entertainments were available to those interested, such as the Indonesian dances presented at the Royal Tropical Institute, the scheduled trips to the flower markets at Aalsmeer, the fish markets of Volendam and Marken, and the post-Congress excursion to the eastern and southern parts of the Netherlands.

It is difficult to attempt to evaluate the Congress in a few words. Certainly the privilege of attending and of meeting and talking with people from most of the countries not dominated by Russia left vivid impressions of the importance of food in any program of international understanding. It was also very apparent that The American Dietetic Association cannot participate in international meetings without assuming a position of leadership. We are not only powerful in terms of numbers and relatively wealthy, but we have a stable organization and a well-defined training program which has won responsibility and leadership for the American dietitian. We have the further advantage of an educational system on which a sound training in dietetics can be based. Moreover, this educational system is capable of expansion to increase greatly the numbers of people who may be trained. Many opportunities for advanced training also exist. It is doubtful at this time whether our total educational program will meet the needs of students in dietetics from all countries. However, certain phases of that training could supplement many meager educational opportunities, and ways should be sought to make our training available to some of the many who are looking longingly at American schools. This probably will mean a larger number of special (non-degree) students in the colleges, as well as arrangements for experience in our hospitals and other institutions which are adapted to a more limited educational background than that of the American college graduate.

The American Dietetic Association also will need to assume leadership in keeping channels of communication open between national dietetic associations. This offers an opportunity for state associations to work with the dietitians of a single country, assisting them in such things as building libraries, making contacts for those interested in study in America, and so forth.

Lastly, if another international congress is to be held within the next four years, we will be called upon for leadership in planning even though the actual meeting takes place on the Continent. We have the opportunity to be a real force in the development of dietetics over the world. Are we ready to assume our responsibilities?

The Army Dietitian Goes into the Field

The Army dietitian in the European Command is now charged with a double mission—that of managing food service both in a fixed hospital and a mobile tent hospital which must be prepared to move from place to place on short notice. Such a mobile hospital may be functioning many miles from the home hospital unit.

To meet her responsibilities, the dietitian must be constantly alert. The Army is in the midst of a great training program, the object of which is to have our troops ready to serve and give a good account of themselves in the event of any emergency. Army hospitals are no exception to this policy, and they are expected to be in an advanced state of preparation and readiness. To the dietitian, this involves training personnel, readying equipment, and keeping proper supplies on hand. Much thought and advance planning are devoted to this by the dietitian Mess Officer.

In the fixed hospitals, her responsibility is comparable to that in civilian hospital feeding services. One variant, however, has recently been added to the Army dietitian's scope which is lacking in her civilian counterpart's life. She is now being sent on maneuvers to manage food service under combat conditions.

As the first Army dietitian to be ordered on field maneuvers, I accompanied the 15th Evacuation Hospital to the field for Exercise Rainbow in the fall of 1950. The hospital moved in trucks to the bivouac area some distance from Nürnberg, where a complete hospital under tents was established. The hospital was prepared to take care of anything from colds to major surgery. The Food Service Division arranged for several feeding facilities: one for ambulatory patients, one for enlisted men, and one for nurses and officers. Bed patients in the ward tents were served from the Patients Mess. In addition, we also equipped a cooking truck so that hot meals could be served to the troops in convoy to the bivouac areas.

The following year, Capt. Mildred F. McElreath of the 15th Evacuation Hospital was assigned to similar duty for Exercise Combine, during which other dietitians from the European Command visited the field installation to learn of the problems of feeding under combat conditions.

This work is a new field for dietitians and one in which they may make themselves more valuable to the Army. This responsibility has not been theirs heretofore, for two reasons: the doubt of commanding officers as to whether the woman Mess Officer is stable enough to carry out such an assignment under difficult conditions, and the shortage of Army dietitians. Many more dietitians are needed in the Army if they are to take care of stateside hospitals and the fixed hospitals in various foreign commands and train themselves for field service.—*Capt. Margaret Stuart, WMSC, 16th Field Hospital, c/o Postmaster, New York City.*

Current Comment

CHANGING CONCEPTS IN TEACHING NUTRITION TO NURSES[1]

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Ever since dietetics emerged as a profession, dietitians have taught nutrition in the nursing curriculum. The content of the courses has grown with increasing knowledge and changing concepts, and the time allotted to the subject has varied. Nevertheless, the integration of nutrition into the nursing curriculum and the nursing care of the patient has remained the responsibility of the dietitian.

CHANGING CONCEPTS IN NURSING EDUCATION

Today the dietitian is faced with a more subtle adjustment than introducing new food composition figures or a new dietary regimen into her subject matter to be taught to student nurses. Nursing schools are becoming increasingly aware that they are educational institutions and not training schools. With this awareness, there is a greater concern with teaching methods, with the integration of course content into the whole curriculum, and with the use the student is able to make of what she has learned.

Nursing schools throughout the country have been accredited by their State Boards of Nurse Examiners for as long as nurses have been licensed. Standards, however, have varied widely from state to state and within the state itself. In an attempt to encourage good educational practice, several national nursing organizations were actively engaged in accrediting schools of nursing on a voluntary basis before the war. During the war, the United States Cadet Nurse Corps served to strengthen some schools of nursing and to eliminate some of the poorest by giving financial support to the former and withholding it from the latter. In the past five years two searching reports have focused attention on nursing education and its strengths and weaknesses. *Nursing for the Future* (1) by Esther Lucile Brown and *A Program for the Nursing Profession* (2) by Eli Ginzberg and the Committee on the Function of Nursing have given great impetus to the leaders in nursing education to work for programs which are truly educational and which will produce nurses who can contribute effectively to the health needs of our society.

[1] Presented at the 33rd Annual Meeting of The American Dietetic Association in Washington, on October 19, 1950.

THE CHALLENGE TO THE DIETITIAN

This ferment in the field of nursing education presents a new challenge to the dietitian who teaches student nurses. Our thinking in the past has crystallized into a pattern of classroom courses supplemented by varying periods of practice in the diet kitchen. We have believed, or at least hoped, that this would inevitably turn out nurses with a knowledge and appreciation of the role of nutrition in the nursing care of her patients, even when all evidence of such a result was to the contrary.

The blame for the failure of the program has been laid to the nursing school, to the students, or to both, and often enough with some reason. Seldom, however, have we been willing to realize that we need to re-think an unsuccessful or only partially successful teaching venture as we would re-think a recipe which produced a poor product. It is true that the dietitian shares the responsibility for the nutrition teaching program with the nursing school and that both must conform to minimum state requirements, particularly in regard to hours. But this need not stand in the way of re-thinking unsuccessful teaching. The better nursing schools are usually eager to cooperate with the dietitian with ingenuity and original ideas; and even examiners on state boards have been known to accept unorthodox teaching and practice programs as meeting their requirements, particularly when it could be shown that students from such a course were among those best able to pass state board examinations.

Such experimentation with our traditional courses has been taking place, of course, here and there through the years. In at least one large school of nursing, the course in diet therapy is taught as part of and during the diet therapy practice period and is closely allied to the care of patients in the hospital, rather than to the textbook material which serves only as a guide rather than as "gospel." In another school, both the course and the practice period in diet therapy are integrated into the whole block of medical and surgical nursing and are taught as part of the total nursing care of all patients with whom the student comes in contact during this period. But we need much more of this creative type of teaching before we will have a body of nurses who regard nutrition as an integral part of good nursing care.

PROGRAM AT NEW YORK HOSPITAL

The nutrition teaching program of the Cornell University-New York Hospital School of Nursing combines classroom instruction and practice with

clinical orientation to patient care. This program has undergone minor changes over the years, but it has been in operation a sufficiently long time so that its "workability" has been tested.

Both the content and the practice periods are distributed throughout the three-year course and are pertinent to the particular phase of the student's practice in which she finds herself. Much of the material, other than that given in the two basic courses, is presented to small groups through the conference or seminar method, with students taking active part in the discussion. The result is a constant evaluation of theory against observed conditions in the patient and the reiteration of facts and concepts so essential to learning for use. For convenience, I shall discuss the program as it relates to each of the three years of the student's training.

First Year

The course in nutrition is short. This is partly because it *follows* the courses in chemistry, physiology, and anatomy, and therefore does not need to include material belonging to those courses; and partly because only normal adult nutrition is taught at this period since that is the only group with which the student is yet acquainted. Cooking accompanies the course in order to illustrate and broaden the understanding of the subject and to give the student an understanding of the principles underlying good "products" so that she can teach these to patients when necessary.

Diet therapy instruction follows the course in nutrition. It is integrated with the doctors' and nurses' lectures in medical and surgical diseases. Again, cooking is taught as part of the course, partly to develop skill in preparing menus, but also for the same reasons it accompanies teaching in nutrition.

Concurrent with the course in diet therapy and beginning in the middle of the first year, clinical conferences, centered around the care of actual patients, are held weekly with each group of students on each ward in medicine. Less frequently, clinical conferences for the student group as a whole in the surgical services are conducted. These conferences, both on medicine and on surgery, are designed to orient the student toward the application of the theoretical classroom material to the actual situation with patients. Short studies of food intake, done by each student on both medical and surgical patients, serve to focus the student's attention on the relation between the disease and the dietary order, on the foods constituting the dietary order, on the nutritional adequacy of the diet, and most of all on the response of the patient, both physically and emotionally, to food.

Second Year

In the second year, the class rotates in groups through three services: medicine and surgery, pediatrics, and obstetrics. Four weeks' practice under the supervision of the ward dietitian is included when the student is in the medical and surgical service. There she is responsible for writing and serving the diets of approximately thirty patients, including both house diets and therapeutic regimens. There is abundant opportunity for visiting the patients under her care and catering to their individual needs as well as explaining to and teaching the individual patients the use and need of normal and therapeutic diets. The practice is augmented by eight conference hours with the teaching dietitian for the discussion of specific practice problems, and for the introduction of such new material as has occurred since the student's first year.

On the pediatric service, the student is introduced to growth requirements of infants and children in two lecture hours. Here again the clinical conference method for all students on a ward is used to present the nutritional care of specific patients under the student's observation, and to teach the adaptations from adult diet therapy to the needs of children. These conferences are held weekly for all students on infant and older children's wards, each student averaging eight such conferences during her time on pediatric service. The work in pediatric nutrition is further implemented by experience and conference hours in the formula laboratory.

In obstetrics, the student is taught nutritional requirements in pregnancy and lactation, special dietary practices at the time of delivery, and therapeutic obstetrical diets, all related to the care of actual patients. She also observes and teaches a mothers' class in nutrition. This is the student's first opportunity to do group teaching in nutrition. She is encouraged to use various kinds of illustrative material ranging from pamphlets to films, and it is often a satisfying experience when she discovers that she actually has some knowledge to impart.

During her out-patient experience, either in the obstetric or pediatric service, depending on which comes first, the student has an hour's conference on budgets and budget making. This material is used to evaluate the adequacy of the income for the needs of the patient for whom she is doing a family study. It helps to point out that where income is inadequate, the food expenditure is likely to be the first to suffer, with its implications of the effect on the health of the family.

Third Year

In the third year, the student uses her nutrition largely in the care of ambulatory and home patients. She spends two weeks in the nutrition clinic where, under the supervision of the clinic dietitian, she teaches out-patients about therapeutic diets. As part of this experience, she prices foods in the community markets near the hospital and calculates the cost of a week's food for various age groups, giving reality

to the figures she has used in her budget class and developing an appreciation of food problems of her patients at home.

During the two months she spends with the visiting nurse service, she finds almost continuous use for all of the aspects of nutrition she has learned in the previous two years. In psychiatry, too, and on the private patient service she will discover that nutrition plays an important role in the care of her patients.

Thus we find that at the end of her three-year training, with its alternation of theory and its application to patient care, the nurse has come to regard nutrition not as a separate subject, but as one of many skills she has acquired to meet the demands of her ever-enlarging profession.

BETTER PREPARATION FOR TEACHING

You may well ask how all this is to be done. There is not enough money nor are there enough dietitians for each nursing school to have its own teaching dietitian. I would like for a moment to turn to the study made by Madge Myers entitled "Is the Dietitian Adequately Prepared to Teach?" (3), which appeared recently in our JOURNAL. Although the number answering Miss Myers' questionnaire was small compared to the total number of dietitians, I am inclined to believe that her findings reflect the beliefs and attitudes of our group as a whole toward the teaching of nutrition to nurses. Although many problems were voiced and uncovered, there is one with which I would like to deal specifically, and that is the lack of preparation for teaching.

How can we encourage dietitians to become better teachers? There are, it seems to me, some concepts we can take over from nursing education itself. In the good nursing school, the student is oriented toward her role as a teacher of patients from the beginning. She must understand the underlying fundamentals of her nursing procedures, not only so that she can do them correctly, but so that she can explain them to her patients and thus gain their cooperation.

Could not something like this be done in our home economics courses on an even broader base? The dietitian, no matter what her field, is a teacher. She teaches cooks and pot washers, pantry maids and waitresses, patients and clients, student nurses and dietetic interns. I wonder if we would not find rich motivation and interest, if learning, even at the college level and in the beginning of specialization, were oriented to the need for understanding the knowledge so well that it can be handed on?

Another factor which would help the dietitian immeasurably is a realistic course in education—by this I mean a course dealing with some of the rudimentary facts of the psychology of learning, with "teaching plans," and with the evaluation of learning, whether of an individual or of a group. This might mean that the three-credit course in education required for the dietetic internship be given by members of the home economics faculty instead of the department of education. There are home economics schools now doing this. There is no question that these students are better prepared to meet actual teaching situations than those who have had the conventional beginning course in education, valuable perhaps as a basis for further work, but of no value when taken as an isolated course.

Lastly, I would plead for better orientation to the teaching of student nurses than is now given in most of our approved dietetic internships. The dietetic intern should spend at least a week—but very much better, two weeks—with the dietitian or dietitians responsible for teaching nutrition to student nurses. The intern should become acquainted with the nursing curriculum in her hospital as a whole; with the *Curriculum Guide for Schools of Nursing* of the National League of Nursing Education (4); and with *A Manual for Teaching Dietetics to Student Nurses* of The American Dietetic Association (5).

During this time she should observe classes and have an opportunity to teach under supervision (being careful not to sacrifice the learning of the student nurse to that of the intern); she should actively participate in all nutrition conferences held with student nurses; she should plan a syllabus, make out lesson plans and examinations; and most of all, she should evaluate her own learning experiences in the light of what one can expect from students in general.

Again, although what I have said applies particularly to the preparation of the dietetic intern for the teaching of student nurses, the principles can be applied to all teaching and learning activities. There is no difference between teaching a man to use a dishwashing machine correctly and a student nurse a nutritional concept. In each case, the result should be satisfactory *use* of the information.

This brings us back to the statement at the beginning of the paper regarding experimentation. If I may use the example of the dishwasher again, we do not take this man into a classroom and teach him, by chart and word of mouth, about the mechanics of the dishwasher and then give him some references to read. We teach him by demonstration, using the machine as our model. When we have finished, we ask him to demonstrate its use to us until we are both sure he knows what he is doing. Some such practical attitude must infuse all of our teaching of nutrition to the student nurse. The hospital is full of patients; they are her interest. It is for them that she has gone into nursing, and not until we tie up our theory with her practice will nutrition in the nursing curriculum become the vital subject it should be. Then and only then will the dietitian have taken her rightful place as a member of the faculty of a school of nursing.

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THE NUTRITION EDUCATION OF THE NURSE[1]

MADGE MYERS

Assistant Director, Dietary Department, The Ohio State University Hospital, Columbus

The new trend of thought in nursing education is to consider the patient as a member of a community—not just Mr. Smith in Room 507 with heart disease, but Mr. Smith with certain physical, economic, and sociologic problems which must be considered in order to return him to an active, participating life. The state of his and his family's nutritional needs is vital to his well-being. What he does or does not eat may affect his behavior considerably.

The emphasis today on the preventive aspects of medicine and nursing involves nutrition intimately. The current interest nurses are showing in public health nursing, agency work, and industrial and school nursing means that they must constantly be aware of the health needs of the people in the community. Good food habits may prevent or reduce industrial accidents, improve school attendance and grades, or reduce the number of people requiring agency and public health attention. Frequently, the nurse is the only professional person besides the social worker who is available to help, advise, and direct the needy in her community. Often she must appraise their nutritional status, determine their needs, and show them how to manage and care for themselves. Budgets involve food. Marketing, cooking, and meal planning as well as advice on dietary modifications all come within her realm.

What if the nurse elects to remain in hospital nursing? Does she, too, have such a definite need for nutrition information? The nurse who knows her "diets" and how the dietary department functions is more valuable in making the patient's life more comfortable and pleasant. Actually, she is usually the go-between for the doctor and the dietitian. She can see to it that the proper dietary orders are given. She tends to those important "little things." She lets the dietitian know immediately that Mr. Smith in 507, even though he is on a regular diet, left his teeth at home. The nurse sees that medications, treatments, or dressing changes do not interfere with mealtimes. She helps to urge people to eat (she now knows why they should) or watches the obese patient and his candy or donations from fond relatives. All such little things help in dietary education of patients. Often the nurse is the only one who is aware of the money, family, or psychologic problems the patient might have. Again, because she knows what kind of help might be available from the dietary department as well as other departments, she is in a position to help the patient immeasurably.

The nurse has vital need for basic nutrition education. We have self-evident, concrete reasons for teaching it. The curriculum plans and course objectives that have been so carefully set forth are quite in line with our present concepts of education and with the present needs of the nurse. They present definite goals of achievement. What they really mean is that, as a result of spending a specified amount of time in classes and in practice, a nurse should have sufficient nutritional knowledge and experience, which, coupled with her knowledge of the medical, surgical, and nursing arts, will enable her to cope with the various problems which can affect the health and well-being of a person, a family, a community.

USING SOURCES AT HAND

Where does the hospital dietitian fit into this picture? It seems to me that she is the center of it. True, others are as well, maybe even better versed in the science of nutrition. In several nursing schools on college campuses, this phase of the nurse's nutritional training is taught in another college department. It is considered a "basic" course which should be of value to any young woman whatever her interest. Right here—in this inclination to treat foods and nutrition for nurses as though it were unrelated to the business of nursing—is where I feel we make our first big mistake. We forget where we are.

We are teaching young women in their first year of nursing. Their age is comparable to that of most college freshmen, but they are "different" in that they have decided on a career in nursing because they want to learn to take care of sick people. They (with apologies to Miss Northrop and Mr. Carroll [1]) have a "porpoise right behind them and it's treading on their tails." Like Alice, they go nowhere without their "porpoise." Why don't we make better use of this purpose as a vehicle for conveying nutrition information? We can, if we take a little time and use some ingenuity, make the prescribed courses in nutrition and foods an integral part of the student nurse's ideas of what nursing is. By using the nutri-

[1] Presented at the 34th Annual Meeting of The American Dietetic Association in Cleveland, on October 10, 1951.

tion clinic to teach real-life problems in food economics, food habits, customs, and the planning of adequate diets, not only can we make this part of the course interesting and vital, but we can give a preview of other and more advanced or technical problems. Prenatal and well-baby clinics are source material for instruction in the dietary needs in pregnancy and lactation and in infant feeding. A few live actors and a few real problems can do much to make the necessary textbook material a vivid learning experience.

Cooking itself need not be a distasteful chore. I recently asked one dietitian how her girls felt about cooking. "Oh, they love it," she replied. "What do you do?" I asked. "Well, we don't have too adequate laboratory facilities so we must do more menu planning and market orders and budgeting. We use people or families in the community who need help and actually try out our theories. Each girl can't cook each period, so each has a problem for the week—maybe to try out a certain menu, to compare it with another. I see that there is always a new cooking experience in each menu. Thus, without realizing it, they learn about egg cookery, milk, starch, and so on. I have a lot to do; it takes some planning and preparation, but we have fun, and the students feel as though they are helping someone." This type of teaching is not always possible, or may not even be advisable. However, it illustrates how one clever young lady makes the most of "inadequacy." Again, it is the hospital dietitian who can find the problems and is in a position to take advantage of out-patient and in-patient material to make her point in teaching student nurses.

I think it is generally agreed that it is the hospital dietitian who must teach diet therapy and supervise the practical dietary experience. Here, again, she can use real examples, real problems to make the work interesting and valuable. I might note here that if it is at all practical, the same person really should be responsible for both the course in foods and nutrition and in diet therapy.

All this illustrates why a hospital dietitian should be responsible for the nutrition education of the student nurse. What, then, is the reason for our frequent lack of success?

MOTIVATION

It is doubtful whether we can lay all the trouble to the subject matter we teach. The accepted course outlines and suggestions for practical experiences seem to meet the stated needs. Naturally, every teacher needs to adapt the outlines and suggestions to fit her own situation. We must always keep in mind such things as:

(a) Why must this be a part of the learning experience?

(b) Is this experience or fact of any real value to the student?

(c) What is to be gained by doing or learning this?

Hilda Taba emphasizes (2) that if needs and objectives are clearly understood, content and learning activities can be better and more consistently integrated. In other words, we must have a *reason for teaching*. That we surely have.

SOLVING THE PROBLEM

After we have decided on the really essential material, the *how-to-do-it* becomes our chief problem. Certainly, it seems to have boiled down to the fact that the teacher may be the reason why we are not always successful in attaining the desired objectives for dietary training of the student nurse.

First, the dietitian needs to be prepared to teach and interested in doing it. Then she must convince the student that nutrition is interesting, valuable, and not too difficult. How should she do *that*?

The following few suggestions may prove helpful:

(a) Make it your business to get to know and understand the student nurses. Why did they go into nurses' training? What do they do? What other courses are they taking? What kind of practice and experience have they had and are they going to have as graduate nurses?

(b) Exhibit interest and enthusiasm about your subject matter—not about the importance of nutrition to a dietitian, but the importance of nutrition to the nurse. You *like* nutrition or you would not be a dietitian. Why is it interesting? However, you can never do this if you are like one dietitian I know. Some years ago, she told me, in complaining about her teaching duties, how bored she was. She said she often caught herself going to sleep while talking. What an interesting presentation that must have been!

(c) Be human, attractive, friendly. We can't all be beautiful, but a pleasant friendliness surely helps in attracting attention.

(d) Above all, avoid being critical of other professions. This point needs to be watched, especially in the dietary practice portion of the student's experience. Mutual understanding of each other's problems should help eliminate this very real fault.

(d) Use a dietitian with experience for the teaching assignment. Sometimes the teaching responsibilities are given to the newest and youngest dietitian on the staff. Maybe she is capable of handling them, maybe she would be more sympathetic and understanding with the student nurses, maybe she does have a more recent theoretical background. However, she is usually unsure of herself (or too sure), afraid (or not afraid enough), and not old enough to handle disciplinary problems. Most important of all, she has not the backlog of experience, case histories, and contacts that help make teaching interesting. All she has is her textbook knowledge which she tries to pass on just as it was given to her.

(f) Lastly, and probably the most important of

all, arrange for the time to do the job properly—time to think and plan. When we are busy, we are apt to take the easiest way out: follow the text word for word, hand over our responsibilities to someone else, find "busy work" for the student to do until you can get to her, or teach the way we were taught. Maybe we even have our own class notes to fall back on to use as lesson outlines!

Of course, finding the time to teach properly is not as easily done as it is said. The very word "dietitian" seems to be synonymous with "too many irons in the fire." Many hospitals are trying to meet the situation by having a specific "teaching dietitian." Although she is a member of the dietary department, she may even be on the payroll of the school of nursing, the school of home economics, or both. This, probably, is a solution we can now offer to ease the situation, but it is not entirely without faults.

Dietitians who have constant contacts with patients and doctors can usually produce better problems, cases, and stories. They know the latest developments in treatment and are up to date on terminology. They are aware of nursing problems. Moreover, it is good for them to teach—it makes them better dietitians. The teaching dietitian can get "out of touch," become forgetful of the actual problems facing the nurse and the dietary department, and even irritate her fellow dietitians by being too theoretical and impractical. However, it seems to me that the dietitian who is given the time and who likes to teach can, if interested, overcome the handicaps of limited patient and medical contacts by establishing close relations with the other members of the dietary department. She can spend time looking up material to use, which is surely better than relying on the already too busy hospital dietitian with many other responsibilities.

Regardless of the solution of the problem of who, what, why, and how in the nutrition education of the student nurse, it appears obvious that the teaching of student nurses is a major part of the business of the hospital dietary department (3). It can be neglected no more than can our administrative responsibilities. A nurse, well versed in dietary procedures, can be our major ally in promoting our part in the betterment of the patient, in helping to improve the health of our neighbors and friends. The aims and ideals of the nursing profession are much the same as ours. We must be mutually helpful if we are to attain them.

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Nutritional Status in Central America

Dietary surveys have now been carried out in all of the countries of Central America and in Panama by the Institute of Nutrition for Central America and Panama (INCAP). In addition to revealing a marked deficiency in the intake of quality protein, they show a generally low level of intake of vitamin A. The nutrition surveys show a high incidence of follicular hyperkeratosis and other skin changes which may be associated with the low intake of vitamin A. The dietary surveys also show an intake of riboflavin and niacin lower than the recommended allowances, but clinical signs and symptoms of these deficiencies have not been evident in the school children and adult groups studied.

Although specific deficiency diseases are not common in the school-age children and in the adult group, they are common in the infant and preschool children. Severe undernutrition in infants, with children of eighteen to twenty-one months looking like shriveled, sick two- or three-month babies, is common. Also relatively common in Central America is the condition known as policarencie infantile, which appears identical in many cases with the kwashiorkor of Africa.

Parasitic diseases and chronic disease are complicating factors in the nutritional picture. It is absurd, of course, to consider nutritional measures alone in populations which are heavily infested with intestinal parasites or malaria, or, in some particular cases, tuberculosis. A large proportion of the rural population of the countries of Central America has practically a 100 per cent incidence of intestinal parasites, and a very high incidence of multiple intestinal parasitism. The actual records are sometimes unbelievable. A cross section of a community in Costa Rica showed 98 per cent with multiple infections, including ascaris, triciurus, trichicephalus, hookworm, Giardia, and Endamoeba histolytica, and many of them with malaria. Of course, their nutritional problems are considerably more than food.—*Excerpted from address by Dr. Nevin Scrimshaw, Director, Institute of Nutrition for Central America and Panama, given before the Food and Nutrition Board, April 24, 1952. Proc. Food and Nutrition Board 12: 24 (May), 1952.*

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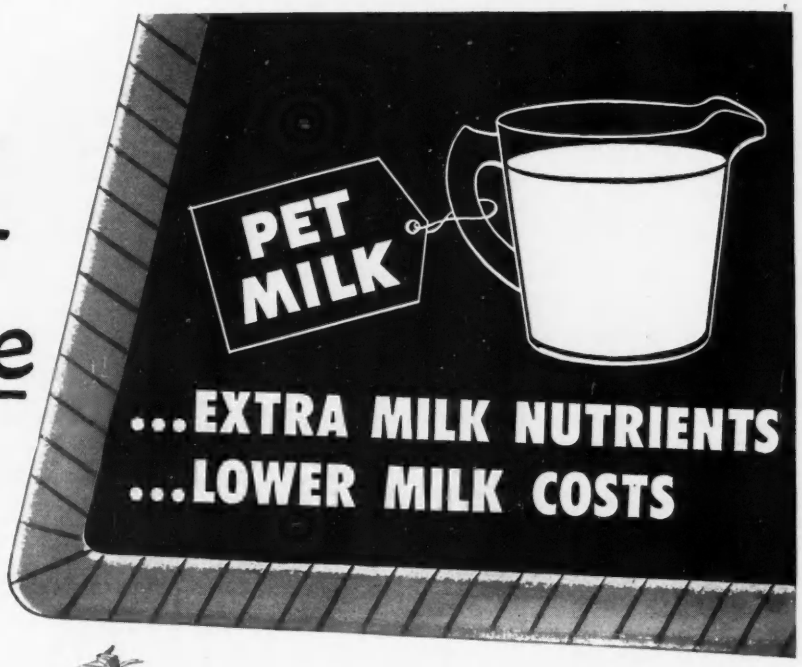

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Book Reviews

Reduce and *Stay* Reduced. By Norman Jolliffe, M.D. New York: Simon and Schuster, 1952. Cloth. Pp. 238. Price $2.95.

This book is a well-written discussion of a most popular subject. Both the professional worker and the person concerned with his own weight loss would find it helpful, as well as technically accurate.

Part one of the book wisely deals with the "why" of reducing on the premise that if an individual is well-informed regarding the reasons for weight loss and the basic physiologic processes involved he will be more likely to follow through on recommended dietary routines. The principles of good nutrition are stressed as the key to safe and sensible reducing.

Dr. Jolliffe explains the reason people overeat by coining a new word, "appestat," which is defined as an automatic regulating center in the hypothalamus controlling the appetite. He proposes that the functional causes of a high appestat (overeating) can be divided into habitual, cortical or purposeful, and psychosomatic. Considerable emphasis is placed on habit as an important factor in changing automatic body reflexes. He appears to feel that psychologic factors do not play as major a role or might even be responsible to a considerable extent for the development of the habit of overeating. Assuming that continuous overfeeding sets the normal appestat at a level so high that satisfaction can no longer be obtained on a normal food intake, then in contrast, the author feels that a rigid adherence to a low-calorie diet will result eventually in the adjustment of the appestat to a lower level, so that a smaller intake of food will give satisfaction. This is an interesting physiologic theory with which everyone may not agree.

Several methods of determining weight status, such as the ruler and pinch test, are discussed. The "mathematics of reducing," such as the estimation of daily caloric expenditure and predicted loss of weight, the selection of proper caloric deficit, and the diet prescription are all explained in factual but highly readable form, at least for the college-trained.

The numerous diet plans at different caloric levels are excellent. The idea of "an optional calorie budget" is ingenious and allows for individual preferences. It is practical at all but the lowest caloric levels (600–1200) where the optional calories must really be used for certain specific foods if the diet is not to become inadequate. Menus and recipes sound most palatable and satisfying. The entire book is well worth reading, certainly one of the best books on the subject to date.—*Elizabeth K. Caso, Nutritionist, Diabetes Section, U. S. Public Health Service, Boston.*

Hygiene, Infectious Diseases and Dietetics. By Dennis H. Geffen and Susan Tracy. New York: Longmans, Green and Co., Inc., 1952. Cloth. Pp. 276. Price $1.85.

This book, written by the Medical Health Officer to the Metropolitan Borough of St. Pancras and the Assistant Medical Officer, London County Council, is intended as a textbook for student nurses and students of social welfare. The co-authors are associated with the Great Ormond Street Hospital in London. Because it is an English book, the information conforms to current practices in England and does not, for all subjects discussed, conform to those in this country.

Hygiene, infectious diseases, and dietetics comprise the three parts of the book's content. The hygiene section discusses methods of heating English homes and institutions; structure of the eye and factors of good lighting; water supplies and diseases related to water; milk and diseases related to it and laws affecting its distribution; refuse and sewage disposal; personal hygiene including types and kinds of clothing for various age groups; exercise; and hygiene of the ward and sickroom.

The section on infectious diseases discusses the defense mechanism of the body against infection together with serum and vaccine therapy; the kinds of infectious diseases with the symptoms; the course of these diseases; and nursing care.

The third section, on dietetics, includes a brief discussion on the composition of foods, the value of special foods, the feeding of various age groups, therapeutic diets, methods of cooking, food handling and preservation, and food poisoning. The body's need for food nutrients is explained in accordance with the British recommended allowances which differ from those used in the United States.

The book is well written in simple, easily understood language. Although many words and expressions are British, the reader quickly learns the meaning from the text. The section on dietetics could be used with lay groups.—*Lillian Nash, Chief, Division of Nutrition, Cook County Department of Public Health, Chicago.*

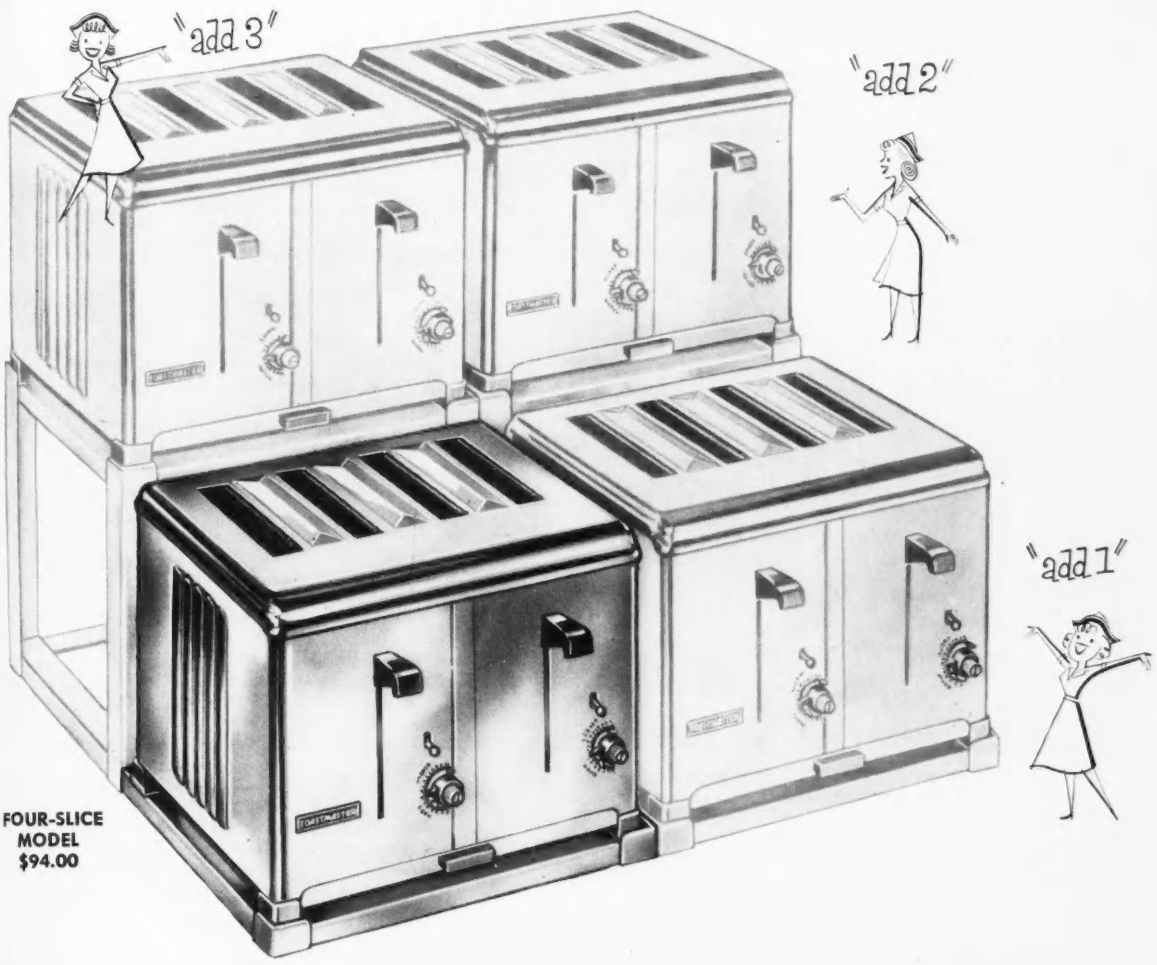
The Urban Working-Class Household Diet 1940 to 1949. First Report of The National Food Survey Committee, Norman C. Wright, Chairman. London: His Majesty's Stationery Office, 1951. Paper. Pp. 114. Price 3s. 6d net.

This is the first of several technical reports to be published by the National Food Survey Committee analyzing data on food purchases and food consumption in Great Britain during the war and postwar period 1940 through 1949. The National Food Survey was initiated in 1940 as an independent check on food consumption during wartime rationing to assess the effectiveness of the British government's wartime food policy. Urban working-class households were chosen as perhaps the most indicative and typical. Due to continuing food shortages and rationing, the survey was continued in its wartime form through 1949.

The first part of the report is concerned with the wartime years 1940 through 1945 and presents annual averages of consumption of individual foods with brief discussion as to factors responsible for changes. These data are then analyzed to show the energy value and nutrient composition of the diet.

The second part of the report is concerned with the national diet after the war, 1946–1949, and again gives annual averages of individual food consumed and an analysis of nutrient composition.

These and subsequent reports based on the data collected from some 7000 households each year, representing an annual average of 25,037 persons, are among the most extensive surveys ever made. The techniques employed and sample work sheets are given in the appendix. The report should serve as a valuable reference for persons planning further surveys. It is also a testimony to the careful and scientific food planning carried out in Great Britain during the past decade.—*Helen S. Mitchell, Ph.D., Dean, School of Home Economics, University of Massachusetts, Amherst.*



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TENTATIVE PROGRAM, THIRTY-FIFTH ANNUAL MEETING
THE AMERICAN DIETETIC ASSOCIATION

MINNEAPOLIS AUDITORIUM, MINNEAPOLIS, MINNESOTA

OCTOBER 21–24, 1952

All meetings unless otherwise specified will be held at the Minneapolis Auditorium

Saturday, October 18

9:00 a.m. REGISTRATION, The Radisson Hotel

9:30 a.m. / 1:30 p.m.—CONFERENCE OF DIRECTORS AND STAFFS OF APPROVED DIETETIC INTERNSHIPS, The Radisson Hotel—Alice Biester, *Presiding*

Sunday, October 19

9:00 a.m.—REGISTRATION, The Radisson Hotel

1:30 p.m.—CONFERENCE OF DIRECTORS AND STAFFS OF APPROVED DIETETIC INTERNSHIPS, The Radisson Hotel

Monday, October 20

8:30 a.m.—REGISTRATION OF DELEGATES TO THE HOUSE OF DELEGATES, The Radisson Hotel

9:00 a.m.—REGISTRATION, The Radisson Hotel

9:00 a.m.—MEETING OF THE HOUSE OF DELEGATES, The Radisson Hotel—Helen L. Gillum, Ph.D., *Presiding*

12:00 noon—LUNCHEON (for delegates only), The Radisson Hotel

7:00 p.m.—GET TOGETHERS—A room will be assigned to each field of interest represented by members of the Association—The Radisson Hotel

8:30 p.m.—MEETING OF OFFICERS OF STATE ASSOCIATIONS, The Radisson Hotel—Helen L. Gillum, Ph.D., *Presiding*

Tuesday, October 21

8:00 a.m.—BREAKFAST MEETING, HISTORY OF A.D.A. (place to be announced)
The Value of State and Local Association Histories—Anna Boller Beach, *Presiding*

9:00 a.m.—MEETING OF STATE FOOD ADMINISTRATION SECTION CHAIRMEN, The Radisson Hotel—Cora Kusner, *Presiding*

9:00 a.m.—REGISTRATION AND EXHIBITS, Minneapolis Auditorium

10:30 a.m.—OPENING SESSION—Margaret A. Ohlson, Ph.D., *Presiding*
A Better You Makes a Better World—Reuben K. Youngdahl, D.D., Mount Olivet Lutheran Church, Minneapolis

1:00 p.m.—CONFERENCES (repeated Tuesday through Friday—limited to 75 persons each)
Cost Control—Food and Labor—Isola Robinson, *Discussion Leader*
Techniques for Training Employees—Rosemary Lodde, *Discussion Leader*
Diet Therapy—The Low-Sodium Diet—Corinne Robinson, *Discussion Leader*
Planning Kitchen Layouts—Mary Northrop, *Discussion Leader*

1:00 p.m.—GROUP THERAPY IN OBESITY—Arnold B. Kirklander, M.D., Assistant Chief, Division of Chronic Disease and Tuberculosis, U. S. Public Health Service, Washington, D. C.

2:00 p.m.—CUSTOMER SATISFACTION
The Pleased Customer—Winifred Eliason, Director of Food, The Greenfield Mills Restaurant Company, Detroit
Panel Participants:
Sister Mary Victor, Director, Department of Nutrition, Saint Marys Hospital, Rochester, Minnesota
Grace Olsen, Catering Manager, University of Washington Residence and Dining Halls, Seattle

2:15 p.m.—DIET THERAPY—
The Diet and Health Problems of the Western World—Ancel Keys, Ph.D., Professor and Director, Laboratory of Physiological Hygiene, School of Public Health, University of Minnesota, Minneapolis

3:30 p.m.—BUSINESS MEETING OF MEMBERS OF THE AMERICAN DIETETIC ASSOCIATION—Margaret A. Ohlson, Ph.D., *Presiding*

8:00 p.m.—NUTRITION ADVANCES, The Radisson Hotel
Newer Findings in Nutrition Research—Olaf Mickelsen, Ph.D., Assistant Chief, Laboratory of Biochemistry and Nutrition, National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland
Human Nutritive Requirements and Recommended Dietary Allowances—Grace Goldsmith, M.D., Professor of Medicine, School of Medicine, The Tulane University of Louisiana, New Orleans
A Consideration of the Supranormal Dietary Requirements of Certain Acutely Ill Patients—Jonathan E. Rhoads, M.D., D.Sc., Professor of Surgery, Hospital of the University of Pennsylvania, Philadelphia

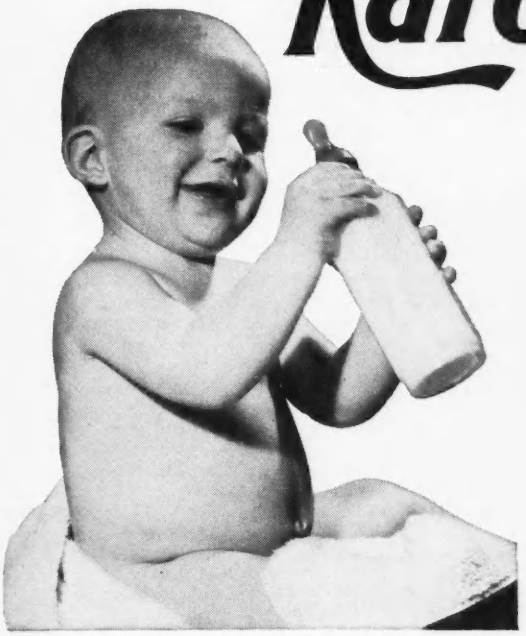
Wednesday, October 22

9:00 a.m.—REGISTRATION AND EXHIBITS, Minneapolis Auditorium

9:00 a.m. to 12:00 noon—CONFERENCE OF COLLEGE AND UNIVERSITY HOME ECONOMICS FACULTIES AND DIRECTORS AND STAFFS OF APPROVED DIETETIC INTERNSHIPS—Alice Biester, *Presiding*
Theme: A Cooperative Program Is Needed to Help Develop Dietitians to Meet Today's Responsibilities
Administrative Development—Alta B. Atkinson, Manager, Food Service, Teachers College, Columbia University, New York City
The Application of Scientific Principles Is Necessary for On-the-Job Performance—Anna Light, Ph.D., Head, Department of Home Economics, University of New Hampshire, Durham
Panel: The College—The Internship—The Individual
Participants:
Lucille Refshauge, Director of Dietetics, Hartford Hospital, Hartford, Connecticut
Helen Demsey, Director, Institution Administration, Mills College, Oakland, California

10:00 a.m.—COMMUNITY NUTRITION—
Working Together in a Community Nutrition Program—Miriam Lowenberg, Ph.D., Head, Food and Nutrition Department, School of Home Economics, The Pennsylvania State College, State College
Panel—F. Eugenia Whitehead, D.Sc., *Moderator*
(Participants to be announced)

Karo...ideal carbohydrate food ...right through life!



...in the infant feeding formula

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For the normal aged, a high carbohydrate diet (up to 60% of intake) ... is indicated by current clinical knowledge. KARO added to milk, cereals or fruits, offers an ideal way to supply a portion of the daily carbohydrate needs.

KARO...is a complete carbohydrate... a balanced mixture of dextrose, maltose, dextrins.

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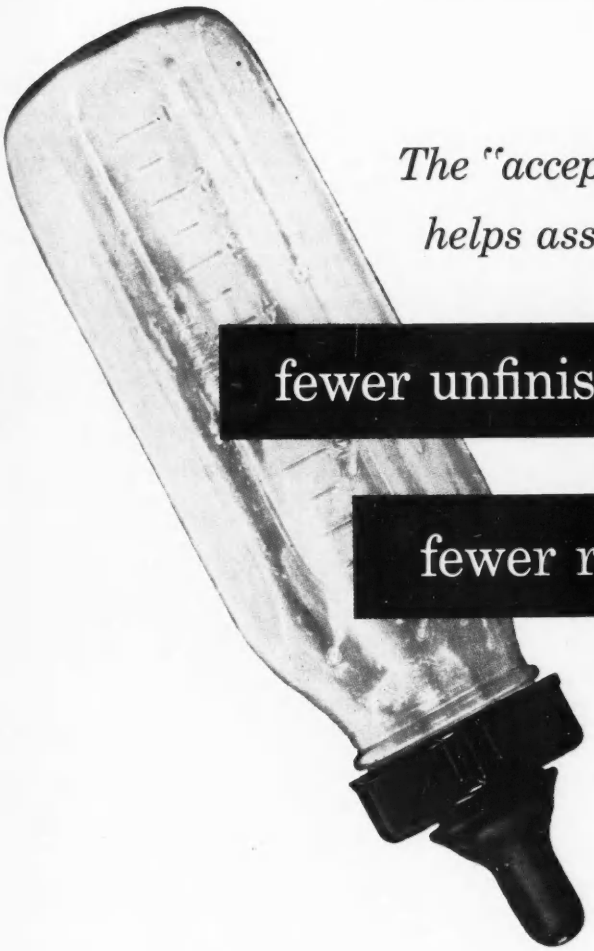
10:00 a.m.—APPRAISING FOOD QUALITY—
Quality Food Production—Lenore M. Sullivan, Home Economics Department, Iowa State College, Ames
How Food Standards Have Been Raised through Consumer Testing of Recipes—Janette Kelley (Betty Crocker), General Mills, Minneapolis
Practical Application in Your Institution—Edith M. Graham, Chief Dietitian, Kennedy Veterans Administration Hospital, Memphis
1:00 p.m.—CONFERENCES (limited to 75 persons each)
Cost Control—Food and Labor—Isola Robinson, *Discussion Leader*
Techniques for Training Employees—Rosemary Lodde, *Discussion Leader*
Diet Therapy—Preparation of Diet Manuals—Corinne Robinson, *Discussion Leader*
Planning Kitchen Layouts—Mary Northrop, *Discussion Leader*
1:00 p.m.—MEETING OF STATE COMMUNITY NUTRITION SECTION CHAIRMAN—Mary Reeves, *Presiding*
2:00 p.m.—How Do You Rate?
The Dietitian's Responsiblity in the Hospital Administrative Structure—George Bugbee, Executive Director, American Hospital Association, Chicago
Professional Ethics—E. Neige Todhunter, Ph.D., Head, Department of Foods and Nutrition, School of Home Economics, University of Alabama
The Physician Looks to the Dietitian—J. Arnold Bargen, M.D., Mayo Clinic, Rochester, Minnesota
2:00 p.m.—CHILD FEEDING PRACTICES IN THE HOSPITAL
Implications and Findings of the Ohio Survey—Eva N. Ylvisaker, The Children's Hospital, Cincinnati *and* Mildred V. Wallace, College of Nursing and Health, University of Cincinnati
3:30 p.m.—DIET THERAPY
The Dietetic Management of Peptic Ulceration—N. E. Rossett, M.D., Chief, Gastroenterology Section, Medical Service, Kennedy Veterans Administration Hospital, Memphis
Present Trends in Nutrition for Patients with Pulmonary Tuberculosis—Sumner S. Cohen, M.D., Assistant Medical Director, Glen Lake Sanatorium, Oak Terrace, Minnesota
Diet in Relation to Dental Health—Dorothea Radusch, D.D.S., Minneapolis
3:30 p.m.—CIVIL DEFENSE—EVERYBODY'S JOB
Interpreting Civil Defense—Dr. Ryland Crary, Federal Civil Defense Administration, Washington, D. C.
Panel—Lillian S. Coover, Ph.D., *Moderator*
Participants:
Dorothy Bovee, Director, Food and Nutrition Service, American Red Cross, District of Columbia Chapter, Washington
Marjorie McKinley, Department of Institutional Management, Iowa State College, Ames
Report on Advisory Defense Committee for Women in the Armed Services—Mary I. Barber
7:00 p.m.—EXHIBITORS' DINNER, The Radisson Hotel

Thursday, October 23

8:00 a.m.—REGISTRATION OF DELEGATES TO THE HOUSE OF DELEGATES, The Radisson Iotel
8:30 a.m.—MEETING OF THE HOUSE OF DELEGATES, The Radisson Hotel—Helen L. Gillum, Ph.D., *Presiding*
9:00 a.m.—REGISTRATION AND EXHIBITS, Minneapolis Auditoriu n
10:00 a.m.—FOOD PROTECTION
National Program for Training Food Handlers—James Lieberman, D.V.M., M.P.H., Public Health Service, Washington, D. C.
A Critical Review of Sanitation—John H. Fritz, Chief, Food Section, Division of Public Health Engineering, Health Department. Kansas City, Missouri
10:00 a.m.—COMMUNICATIONS ENLIGHTENED
He Who Has Ears—Ralph G. Nichols, Ph.D., Chief, Division of Rhetoric, University of Minnesota. St. Paul
Working with Groups—John Kidneigh, Director, School of Social Work, University of Minnesota, Minneapolis
10:00 a.m.—MATERNAL AND CHILD HEALTH
12:00 noon—HISTORY OF NUTRITION AND DIETETICS LUNCHEON (place to be announced)—E. Neige Todhunter, Ph.D., *Presiding*
Some of the Problems Met During Fifty Years in Child Nutrition—Walter R. Ramsey, M.D., Medical Director, The Children's Hospital, St. Paul.
1:00 p.m.—Conferences (limited to 75 persons each)
Cost Control—Food and Labor—Isola Robinson, *Discussion Leader*
Techniques for Training Employees—Rosemary Lodde, *Discussion Leader*
Diet Therapy—The Low-Sodium Diet—Corinne Robinson, *Discussion Leader*
Planning Kitchen Layouts—Mary Northrop, *Discussion Leader*
1:00 p.m.—PSYCHODRAMA—ITS USE TO YOU (repeated on Friday)—John S. Pearson, Division of Public Institutions, Rochester State Hospital, Rochester, Minnesota
2:00 p.m.—HISTORY OF NUTRITION AND DIETETICS SESSION
2:00 p.m.—DIET THERAPY
The Citrovorum Factor—Carl A. Baumann, Ph.D., Department of Biochemistry, College of Agriculture, University of Wisconsin, Madison
Stress and Nutrition—Clifford F. Gastineau, M.D., Mayo Clinic, Rochester, Minnesota
The Dietary Therapy of Gout in the Light of Our Knowledge of the Disturbed Metabolism in This Disease—Rachmiel Levine, M.D., Director, Department of Metabolic and Endocrine Research, Michael Reese Hospital, Chicago
3:30 p.m.—NEWER ASPECTS OF MANAGEMENT
Work Simplification and the Dietitian—Marion J. Wright, Associate Director, The Harper Hospital, Detroit
This Program at Work—Mary M. Harrington, Assistant Director and Director of Dietetics, The Harper Hospital
Methods Analyses for Dietitians—John Ronald Frazer, Assistant Professor, General Engineering Department, Iowa State College, Ames
3:30 p.m.—MENTAL HEALTH
8:00 p.m.—DIET THERAPY—OBESITY, The Radisson Hotel
The Merry-Go-Round of Reducing Diets—Ruth M. Leverton, Ph.D., Associate Professor, Human Nutrition Research, Department of Home Economics, University of Nebraska, Lincoln
Philosophy of Adiposity—Daniel A. Glomset, M.D., Des Moines, Iowa
Experimental Research on Obesity—Fredrick J. Stare, Ph.D., M.D., Department of Nutrition, Harvard School of Public Health, Boston

Friday, October 24

8:30 a.m.—MEETING OF STATE DIET THERAPY SECTION CHAIRMEN—Corinne Robinson, *Presiding*
8:30 a.m.—MEETING OF STATE PROFESSIONAL EDUCATION CHAIRMEN—Alice Biester, *Presiding*



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fewer rejected feedings

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Similac is available in Powder,
1 lb. tins, and Liquid, 13 fl. oz. tins

1. Bruce, J. W., Hackett, L. J. and Bickel, J. E.: Feeding Premature Infants, J. Pediat. *35*:201 (Aug.) 1949.

A QUARTER-CENTURY OF PROGRESS IN INFANT NUTRITION

M & R LABORATORIES, Columbus 16, Ohio

9:00 a.m.—REGISTRATION AND EXHIBITS, Minneapolis Auditorium

10:00 a.m.—MODERN TECHNIQUES IN TEACHING
- Teaching Techniques in Nutrition—Ercel Eppright, Ph.D., Head, Department of Foods and Nutrition, Iowa State College, Ames
- A Comparison of the Individual-Laboratory and Modified-Demonstration Methods for Teaching Food Preparation—May Stiles Bay, Home Service Department, Michigan Consolidated Gas Company, Muskegon

10:00 a.m.—CHILD NUTRITION
- Emotional Aspects of Child Feeding—John E. Anderson, Ph.D., Director, Institute of Child Welfare, University of Minnesota, Minneapolis
- Iron Requirements of Children—Frances A. Johnston, Ph.D., Assistant Professor of Home Economics, New York State College of Home Economics, Cornell University, Ithaca
- Adolescent Nutrition—Genevieve Stearns, Ph.D., Research Professor, Department of Pediatrics, State University of Iowa, Iowa City

10:00 a.m.—FOOD TECHNOLOGY
- Can We Afford "Quality" Foods?—C. D. Phillips, Ph.D., Economist in Agricultural Marketing, Kentucky Agricultural Experiment Station, University of Kentucky, Lexington
- What's New in Frozen Foods—Donald K. Tressler, Ph.D., Scientific Director, Quartermaster Food & Container Institute for the Armed Forces, Chicago
- New Food Products—Eleanor Howe, Vice-President, Harvey and Howe, Inc., and Editor-in-Chief, *What's New in Home Economics*, Chicago

1:00 p.m.—CONFERENCES (limited to 75 persons each)
- Cost Control—Food and Labor—Isola Robinson, *Discussion Leader*
- Techniques for Training Employees—Rosemary Lodde, *Discussion Leader*
- Diet Therapy—Preparation of Diet Manuals—Corinne Robinson, *Discussion Leader*
- Planning Kitchen Layouts—Mary Northrop, *Discussion Leader*

1:00 p.m.—PSYCHODRAMA—ITS USE TO YOU—John S. Pearson, Division of Public Institutions, Rochester State Hospital, Rochester, Minnesota

2:30 p.m.—FOOD SERVICE OF THE FUTURE, The Radisson Hotel
- Today's Last Word in Equipment of Tomorrow—Clarice D. Gullickson, Chief, Administrative Section, Dietetic Division, Veterans Administration, Washington, D. C.
- The Institutional Kitchen of Tomorrow—W. A. Tusler, Magney, Tusler and Setter, Architects and Engineers, Minneapolis

2:30 p.m.—RECENT RESEARCH, The Radisson Hotel
- The Use of Nonfat Dry Milk Solids—Pauline Paul, Ph.D., Associate Professor, School of Home Economics, Michigan State College, East Lansing
- Ascorbic Acid Requirements of Women—Pearl P. Swanson, Ph.D., Assistant Director and Professor in Charge of Home Economics Research, Iowa State College, Ames
- Amino Acid Content of Self-Selected Diets of Older Women—May S. Reynolds, Professor, School of Home Economics, University of Wisconsin, Madison

2:30 p.m.—NEWER FINDINGS IN RENALVASCULAR DISEASES, The Radisson Hotel
- Production and Consumer Aspects of Low-Sodium Canned Foods—L. E. Clifcorn, Ph.D., Director, Fundamental Research Division, Continental Can Company, Inc., Chicago
- Dietary Factors in the Management of Cardiovascular Disease—Carleton B. Chapman, M.D., Associate Professor of Medicine, Department of Medicine, University of Minnesota, Minneapolis
- Newer Findings and Modern Concepts in Diabetes—Priscilla White, M.D., Joslin Clinic, Boston

7:00 p.m.—ANNUAL BANQUET—Skyroom, Dayton Department Store—Margaret A. Ohlson, Ph.D., *Presiding*
- Your Role in Government—Martha W. Griffiths, Attorney-at-Law, Griffiths, Williams & Griffiths, Detroit
- Presentation of the Lydia J. Roberts Award for 1952
- Presentation of the Mary Swartz Rose Fellowship for 1952—Charles Glen King, Ph.D., Scientific Director, Nutrition Foundation, Inc., New York City
- Presentation of the Marjorie Hulsizer Copher Award for 1952

Dietitian Evaluation System Project, Professional Education Section

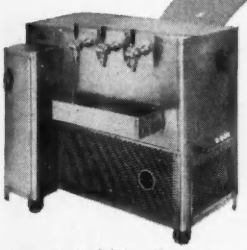
The American Dietetic Association has retained the services of the Personnel Research Institute of Western Reserve University to assist in the development of a new system for rating dietetic interns. If an evaluation system is to be truly realistic, its contents must come from the profession itself. This will require the cooperation of many A.D.A. members.

The first phase which is now complete consisted of sending a form to one-tenth of the members of the Association. This form asked for a work description or word picture of dietitians at specific levels of competence. It was a tool to discover what makes a dietitian more or less effective on the job—her skills, knowledges, and work habits. From these descriptions a set of items will be assembled, and other members will be asked to rate the items on their applicability to interns and their acceptability. The best items will be assembled into an experimental form which still other members will use to rate dietetic interns recently under their supervision. A member of the staff of the Personnel Research Institute will visit many of you who have been closely associated with those interns, and you will be asked to rate them.

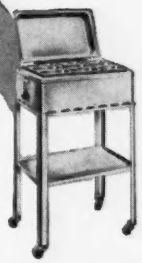
Using these ratings as the criterion, or standard, the experimental form will be tested to see which items are best able to discriminate between the better and poorer interns. These items will then be assembled into a final form, which should be ready for use in 1953.

The success of this research depends to a very great extent upon you. We need your cooperation. In the first phase, 955 requests for descriptions were sent out, and only 150 were returned. This return—less than 16 per cent—is very disappointing. We hope that the response to future phases will be much better.

What's Your Hospital Problem?



Carbonated drink dispenser that automatically measures the proportion of syrup to carbonated water.

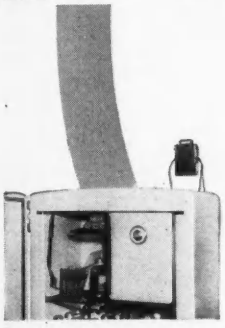


Diet-therm. A special diet tray accessory that rides on top of any average conveyor. Diet-therm is provided with its own temperature control. 54 different combinations of pans.

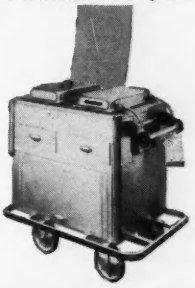
It is traditional in the hospital field to ask Ideal to help solve many problems not covered by any existing standard hospital equipment units.

The specialized field of Ideal is the automatic operation and control of temperatures in utensils and apparatus designed for specific purposes. These requirements often go far afield from Ideal's traditional food conveyor line. Here we show you a few custom-built special units created for hospitals seeking more efficiency and economy in meeting recurring special needs.

Ideal engineers will gladly study your problem and make recommendations no matter what phase of hospital service is involved. This service entails no charge nor any obligation.

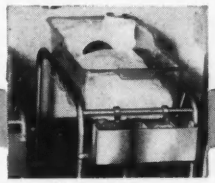


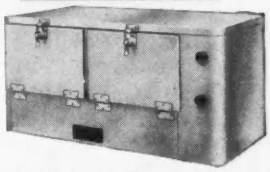
Blood Bank Guard. An alarm device that automatically gives audible and visible signals when the blood reaches 50 degrees of temperature or sinks to 40 degrees.



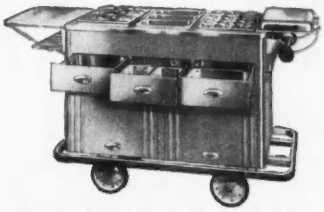
Compact special diet food conveyor for limited volume special diet service.

Bassinet basket that carries all necessary items for complete individual care of infant, avoiding mixed use. One hangs on each bassinet.

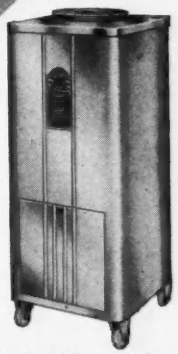




Terminal Sterilizer. The amazing new Ideal unit for automatic sterilization of bottles, nipples and infant formulae.



Standard Ideal Food Conveyors for general hospital use are available in many models.



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Nonfat Dry Milk Solids Help Soften Bread

The Bureau of Dairy Industry, which has previously reported the improvement in bread made by adding 3 to 6 per cent of milk solids to the dough, now announces the results of bread-baking tests which are part of a Research and Marketing Act study. They seem to indicate that milk solids added to bread have little effect on the firmness (softness) of the bread after 72 hr. However, because dry milk solids absorb much more water than flour, additional water can be included in the bread formulas. Thus, the addition of milk solids has the indirect effect of reducing firmness by allowing greater moisture.

Also, several special milk products have been investigated for baking quality in bread formulas. Ion-exchanged fluid milk as a source of powder proved to be satisfactory when the powder was added at the 6 per cent level, but it had no apparent advantages when compared with normal milk powder. Ion-exchanged whey powder, although it produced bread of excellent grain and texture, had a poor water-absorptive capacity. Powders consisting of various proportions of milk and honey solids had satisfactory baking properties and imparted a honey flavor to bread. Additions of soy flour, wheat germ flour, and whole wheat flour in small percentages with 6 to 8 per cent of milk solids did not improve the bread to any significant extent.

Small amounts of fluid cottage-cheese whey can be used in bread, although a sticky and plastic dough and poorly flavored bread result from a formula in which one-half or all of the fluid is whey.—*Excerpted from the Report of the Chief of the Bureau of Dairy Industry, Agricultural Research Administration, 1951.*

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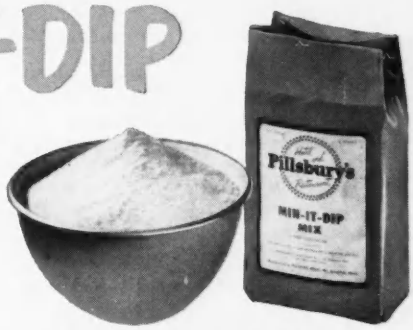

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Current Literature

Contributed by Mildred Bonnell and administrative dietetic interns, University of Washington, Seattle; Henriette Dickinson, University of Chicago Clinics; Pauline Kegereis, The Children's Mercy Hospital, Kansas City, Missouri; Berdena Rosenow, University of Kansas Medical Center, Kansas City, Kansas; and the Journal staff

THE AMERICAN JOURNAL OF NURSING

Vol. 52, July, 1952

* A psychologic approach to weight control. M. E. Gentry and F. L. Swanson.—p. 849.

Psychology Helps Weight Control. Two nurses' conversation opens this article: one is discouraged about her excess weight; the other, a former "fatty," describes her reducing experience which was successful, due in part to her participation in a discussion group sponsored by the Boston YWCA. The group therapy stressed emotional factors leading to overeating. The organization of other such groups now under way is described, and literature on group therapy for obesity is recommended.

ANALYTICAL CHEMISTRY

Vol. 24, June, 1952

* Determination of thiamine in rice and rice products. Rapid and simple method. C. M. Lyman, R. Ory, M. Trant, and G. Rich.—p. 1020.

Analyzing for Thiamine in Rice. A method of determining thiamine in rice by direct application of the color reagents to rice based on the color developed with diazotized *p*-aminoacetophenone is described. The procedure, developed for processing control purposes, makes it possible to determine thiamine without the use of expensive scientific equipment. Thus it is hoped that it may be possible to polish rice to the point where the product can be safely stored and still leave enough thiamine to supply dietary needs.

ARCHIVES OF PEDIATRICS

Vol. 69, May, 1952

* Comparative value of a syrup of dehydrated banana as a carbohydrate for infant feeding. R. J. Waldron and J H. Fries.—p. 205.
* Megaloblastic anemia in infancy. J. W. Carrier.—p. 225.

Banana in Infant Feeding. A milk modifier containing 1 part dehydrated banana to 1.8 parts of a sirup consisting of sucrose, fructose, dextrose, and water was tested in the feeding of healthy, full-term, newborn infants. One group was fed the banana formula, another a dextrin-maltose-dextrose formula, while a third group was breast-fed to provide an additional control. The banana formula was well tolerated. At the end of six days, the infants receiving it showed notably better gains than those given the other formula and were surpassed only by the breast-fed infants. The banana sirup also proved useful in the dietetic management of twenty-eight unselected sick infants. On the basis of these observations, banana sirup seems to have clinical value in the feeding of newborn infants and sick children.

Megaloblastic Anemia. Nutrition appears to be rather an important factor in causing the megaloblastic anemia of infancy. In many cases an infant's diet consists of powdered protein milk preparations with low ascorbic acid and folic acid content. Therapy results in permanent cure in all cases, but the drug of choice is in dispute. Liver extract and folic acid preparations are effective, and vitamin B_{12} shows promise but seems limited in effectiveness if the folic acid supply in the body is low. At present, the condition seems to yield to treatment with one course of liver extract, folic acid, and usually vitamin B_{12}.

CEREAL CHEMISTRY

Vol. 29, May, 1952

* The influence of dried whey on cake quality. F. Hanning and J. de Goumois.—p. 176.

Whey and Cake Quality. The addition of 15 per cent dried edible whey to cake batters improved the moistness and tenderness of the products when various levels of enriching ingredients were used. With the amounts of both eggs and shortening reduced, the cakes retained almost the same high quality as the controls, thus effecting an advantageous reduction in cost. In another test, cakes made with whey were rated superior in texture and flavor to those made with nonfat dry milk solids. Larger additions of whey increased the softness of cakes, the whey appearing to be the sole cause of this result.

FOOD RESEARCH

Vol. 17, May-June, 1952

* Cake structure and palatability as affected by emulsifying agents and baking temperatures. M. E. Jooste and A. O. Mackey.—p. 185.
* The effect of ingredient variations on the quality of white and chocolate cakes baked prior to freezing or baked from frozen batters. A. O. Mackey, P. Jones, and J. Dunn.—p. 216.
* A study of the control of the sanitary quality of custard-filled bakery products in a large city. A. E. Abrahamson, R. Field, L. Buchbinder, and A. C. Stoll.—p. 268.

Emulsifying Agents in Cake Baking. Cake batter containing fat and eggs is referred to as a complex food emulsion and the addition of emulsifying agents, such as mono- and diglycerides of fatty acids, have been found to produce finer grain and texture and increased volume. Monoglycerides in cake batters have been said to result in a marked resistance to variability in baking and handling. The effect of glyceryl monostearate on cakes made with two fats and baked at various oven temperatures is reported, the results being illustrated with tables and photographs. The stabilizing effect of the emulsifier was most effective in baking at high temperatures. Cakes made with butter plus emulsifier had larger volume and were more palatable than those made with emulsifier and hydrogenated vegetable shortening. Neither the percentage of emulsifier used nor its dispersal in fat or water resulted in differences in cake scores.

Effect of Frozen Storage on Cakes. White and chocolate cakes baked and held in frozen storage, and similar batters held in frozen storage and then baked, were studied to determine the effect of variation in ingredients and storage conditions. Different fats, baking powders, and storage temperatures were used, and tests were made with and without emulsifiers. Frozen storage had little effect on the volumes of cakes baked before freezing, but changes in flavor and desirability took place, largely influenced by the type of fat and the length of storage. The most satisfactory cakes from batters stored three months at 0°F. before baking were the chocolate "alkaline" cake made with sulphate-phosphate baking powder and the white butter cake containing 10 per cent glyceryl monostearate.

Sanitation and Custard-Filled Bakery Products. Custard-filled bakery goods have long been recognized as a public health problem because the fillings furnish the moisture, nutrients, and physical state favorable for the growth of microorganisms. Through careless handling and inadequate refrigeration, the foods may be responsible for food infection or poisoning. More than four hundred samples of éclairs, Napoleons, coconut custard pies, and Nesselrode pies from eating establishments, retail stores, and wholesalers were studied by the New York City Health Department. The bacteria and coliform count of the products left much to be desired. Recommendations for sanitary measures were made and, where they were carried out, acceptable products usually resulted.

THE INDIAN MEDICAL GAZETTE

Vol. 86, November, 1951

Insulin test for evaluating control of acidity in the stomach for control of peptic ulcers by surgical procedures. G. N. Gokhale.—p. 489.

* Intravenous glucose tolerance test in normal persons. S. K. Mukherjee, U. N. De, and D. Sarkar.—p. 494.

Intravenous Glucose Tolerance Test. Intravenous glucose tolerance tests were performed on twenty healthy Indians,

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ages varying from twenty-five to forty-five years and weights varying from 121 to 154 lb. Thirty cc. of 50 per cent glucose were injected under fasting conditions, duration of injection being 3 to 5 min. The maximum rise of blood sugar took place within 5 min. of injection. The fall of blood sugar thereafter appeared to take place in two stages; (a) a rapid fall during the first 25 min. when the major portion of the injected glucose was removed from the circulation, and (b) a slow and sustained fall during the next 30 min. The preglucose fasting level was reached within 50 to 60 min. after injection. The maximum height of blood sugar was found to vary, but the time taken for the blood sugar to return to preglucose level was found to be constant in all cases. Glycosuria bore no relation to the height of blood sugar level.

INDUSTRIAL AND ENGINEERING CHEMISTRY

Vol. 44, June, 1952

* Chemicals from milk. M. L. Kastens and F. A. Baldauski.—p. 1257.

Milk Derivatives. The dairy chemicals industry is still an infant in comparison with the giant industry of processing milk for the food market. This report describes the physical set-up and processing procedures of a plant in Norwich, New York. Continued research is being carried on with special attention to the development of products that can be made during periods of reduced milk supplies. Physically, milk is a combination of oil-in-water emulsion, colloidal suspension, and an aqueous solution of organic and inorganic compounds. The fat is the easiest and first component to be extracted. Following that, the casein is precipitated. It is most widely used in the paper-coating field and the stabilization of rubber latex emulsions. Casein derivatives also have outlets in the pharmaceutical and food products fields. The clear, greenish whey that remains still contains almost half of the milk solids. This is the material which until recently was often discarded. Most of the whey proteins are recovered as calcium salts, while the filtered, deproteinated whey goes to the milk sugar operation from which crude and refined lactose are produced. Lactose is the largest volume product from the plant and is used in medicinal capsule formulation, as a carbohydrate source in food products, and as a nutrient in penicillin fermentations.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 149, June 21, 1952

Biological effect of trichloroethylene-extracted soybean oil meal. Council on Foods and Nutrition.—p. 760.

* Toxicity of trichloroethylene-extracted soybean oil meal. Editorials and Comments.—p. 764.

* Diabetic foods. Queries and Minor Notes.—p. 797.

Soybean Oil Meal. Because some soybean oil meal (which was extracted with trichloroethylene) has a toxic effect on cattle and this toxin is transmitted through the bovine placenta, it is recommended that such soybean oil meal not be used as a feed for animals. It is not known whether the unidentified toxic agent accumulates in animal tissues and milk.

Diabetic Foods. A physician is advised that diabetic patients should be encouraged to use natural foods instead of artificially prepared foods. Some suggestions are given concerning the use of low-carbohydrate and low-cost protein foods in the diabetic patient's diet.

THE JOURNAL OF BIOLOGICAL CHEMISTRY

Vol. 196, June, 1952

A new fluorometric determination of thiamine. A. E. Teeri.—p. 547.

* Cholesterol synthesis by liver. I. Influence of fasting and of diet. G. M. Tomkins and I. L. Chaikoff.—p. 569.

* Turnover of serum proteins in diabetes as studied with S^{35}-labeled proteins. L. L. Forker and I. L. Chaikoff.—p. 829.

Effects of a folic acid antagonist on nucleic acid metabolism. D. A. Goldthwait and A. Bendich.—p. 841.

Cholesterol Synthesis. That the nutritional state is a major factor in influencing the rate of cholesterol synthesis within the body is shown by a number of experiments. The liver of rats that had been fasted for 24 hr. showed a pronounced reduction in the capacity to incorporate acetate carbons into cholesterol. Caloric restriction for several days gave the same effect. With the administration of carbohydrate, protein, or fat, however, the capacity was restored.

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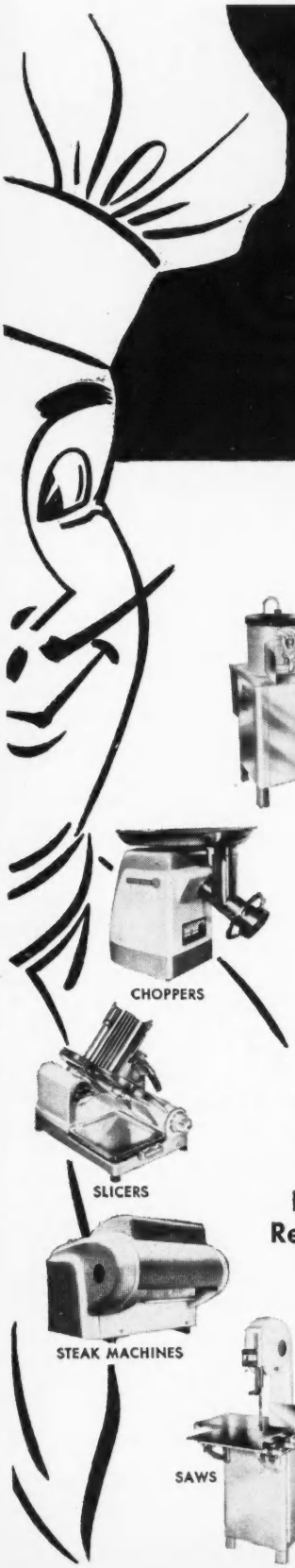

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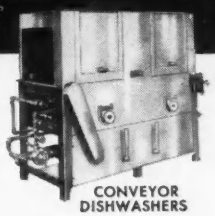

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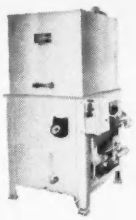

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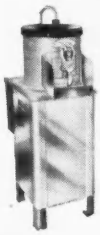

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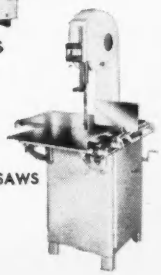

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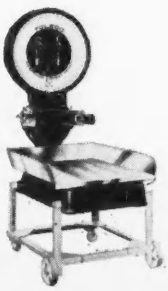

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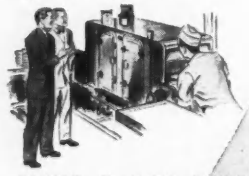

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Serum Proteins in Diabetes. Studies of protein metabolism in diabetes have suggested that the rate of protein synthesis in muscle tissue is impaired by the disease. In the described experiments, it was found, however, that the rate of degradation of serum proteins appears close to normal in diabetes as do the rates of degradation of the separate albumin and globulin fractions. The findings do not identify the protein source responsible for the negative nitrogen balance in diabetes, but it seems reasonable to suggest from the evidence that the condition may originate in the muscle proteins.

JOURNAL OF THE INDIAN MEDICAL ASSOCIATION

Vol. 21, January, 1952

* Studies on carbohydrate metabolism in toxaemia of pregnancy. 1. Sugar utilization in toxaemia of pregnancy. C. Mukherjee.—p. 135.

Symposium on diarrhoea in children.

Etiology and pathogenesis. P. V. Gharpure.—p. 141.

Clinical manifestations. B. D. Patel.—p. 145.

Dehydration. M. P. Bhagat.—p. 148.

Diagnosis and prognosis. K. M. Sukhtankar.—p. 152.

Treatment. P. M. Udani.—p. 154.

Chronic fluorine intoxication—a review. Part II. K. Venkataramanan.—p. 158.

Vol. 21, February, 1952

* Studies on carbohydrate metabolism in toxaemia of pregnancy. 2. Blood sugar utilisation in toxaemia of pregnancy with particular reference to eclampsia. C. Mukherjee.—p. 183.

* Necessity of B-complex factors in the treatment of anaemias. J. C. Patel.—p. 191.

* Treatment of pregnancy anaemias with folic acid compound. A. B. Allan.—p. 206.

Carbohydrate Metabolism. Experiments demonstrated that the rate of utilization of sugar in normal pregnancy is slightly less than that in non-pregnant women. In toxemia of pregnancy it is even less. Pre-eclampsia affects sugar utilization in the body more adversely than essential hypertension complicating pregnancy. Simultaneous study of the sugar utilization and gonadotrophin concentration showed that the two are inversely related to each other. Available evidence suggests that the decreased sugar utilization in toxemia of pregnancy is due to a disturbance of the endocrine equilibrium, in which hyperfunction of the pituitary is an important feature.

Estimation of blood sugar was done in a series of 78 cases of normal pregnancy and 100 cases of pre-eclampsia. No significant change in the concentration of blood sugar was observed in the latter condition. A critical study of the results of blood sugar estimations done in various phases of eclampsia is presented. The results show that eclamptic convulsions are not related to fluctuations in the blood sugar level.

B-Complex Factors in Anemias. Importance of thorough investigation of the cause of anemia is stressed. Shot-gun therapy is deprecated. Evidence is marshaled that B-complex factors (i.e., thiamine hydrochloride, niacin, riboflavin, pyridoxine, pantothenic acid, biotin, para-aminobenzoic acid, and choline) are unnecessary, if not harmful, in the treatment of anemias.

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Folic Acid. The conclusion is warranted that liver (and/or yeast) contains one or more factors which supplement the action of folic acid and are equally essential. The fact that folic acid, if administered alone, has its limitations, such as (a) the inability to revert the macrocytosis in anemia of pregnancy, (b) the leveling off of the erythrocytes, and (c) the persistence of neurologic complications, in no way diminishes the importance nor the essentiality of this factor. These observations merely indicate that one isolated vitamin could not cure a multiple deficiency disease. According to our present knowledge, the results observed can be explained by a supplementary action and also by an interaction of the various constituents.

THE JOURNAL OF NUTRITION

Vol. 47, May, 1952

- The protective effect of dietary fat on immature rats fed thyroid. S. M. Greenberg.—p. 31.
- Cobalt metabolism of young college women on self-selected diets. M. J. Harp and F. I. Scoular.—p. 67.
- Riboflavin in human serum. K. Suvarnakich, G V. Mann, and F. J. Stare.—p. 105.

Vol. 47, June, 1952

- The effects of a vitamin B_{12} supplement, vitamin B_{12} and streptomycin on the metabolism of the rat. A. Black and J. W. Bratzler.—p. 159.
- Relation of serum cholinesterase to nutritional status of adolescents. J. P. Saunders, H. R. Sandstead, R. E. Butler, and O. Mickelsen.—p. 191.
- Effect of oral administration of streptomycin on urinary excretion of B vitamins in man. H. P. Sarett.—p. 275.

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Effect of Fat on Thyroid-Fed Rats. Weanling rats showed a marked difference in their responses to thyroid according to the dietary components fed concomitantly. The efficiency of a fat-free, sucrose-casein diet was noticeably decreased when thyroid was added, and the condition was not corrected appreciably with the addition of vitamin B_{12} while the thyroid was still being fed. The growth-depressing effects of the thyroid were counteracted either by linoleate or by whole fat, but the efficiency of the diet was not as great in any of the thyroid-fed groups of experimental animals as in parallel control groups.

Cobalt Metabolism. Since cobalt was discovered to be a part of the B_{12} molecule, it has been suggested that the substance may influence the production of B_{12} in human beings. In a study to determine the cobalt metabolism of young college women eating self-selected diets, it was found that twenty-one of the twenty-three subjects were in positive cobalt balance and that from 73 per cent to 97 per cent of the dietary cobalt was absorbed.

Serum Riboflavin. Normal levels of serum riboflavin in humans are being studied in the hope that criteria for diagnosing human riboflavin deficiency may be obtained. A microfluorometric method for the determination of riboflavin, both free and as flavin-adenine-dinucleotide, in serum was used in the experiments reported. It was found that nitrogen balance and riboflavin intake had little influence on serum riboflavin levels, provided tests were made several hours after riboflavin intake. Serum riboflavin values, therefore, seem to be of assistance in the diagnosis of human riboflavin deficiency.

B_{12}, Antibiotic, and Metabolism. Albino rats were fed an all-plant protein ration to which was added a commercial vitamin B_{12} supplement containing an antibiotic. In a second experiment, rats were fed the same ration with the component parts of the supplement, i.e., vitamin B_{12} minus the antibiotic, or streptomycin free of the vitamin, or a combination of the two. The purpose was to study the manner in which the energy of such diets was utilized for body gains. Animals receiving the vitamin B_{12} supplement showed a greatly increased intake of food with a consequent efficiency in growth. Streptomycin was found to have little effect on growth, but when fed in conjunction with vitamin B_{12}, the effect was slightly better than when the vitamin alone was fed. The supplements appeared to have no effect on nitrogen utilization.

Cholinesterase and Nutritional Status. It was thought that the relation of serum cholinesterase to nutritional status might provide a comparatively simple method for evaluating the overall physical condition of human beings. To test the relationship, 119 undernourished junior high school pupils were studied with the result that no useful correlation was found between serum cholinesterase levels and hemoglobin, serum carotene, degree of underweight, physical manifestations of malnutrition,

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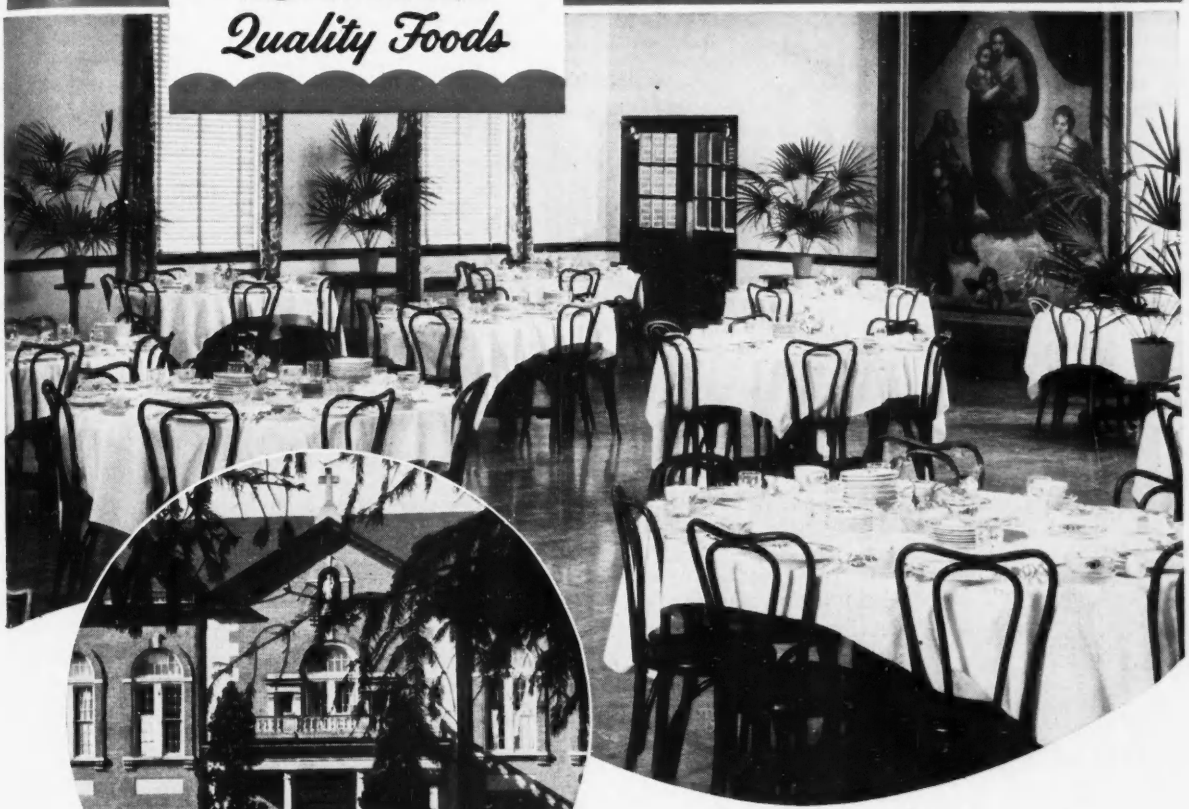

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or general appearance from a nutritional standpoint.

Streptomycin and the B Vitamins. Urinary excretion of B vitamins was measured after the intake of streptomycin to learn whether the bacteria affected by the antibiotic play a role in modifying or supplementing the dietary intake of the vitamins. Hospital patients, free of organic disease, were fed controlled diets in which the content of thiamine, riboflavin, niacin, and protein was carefully determined, as well as the carbohydrate source. After suitable control periods, streptomycin was given orally in capsules. The excretion of folic acid was not decreased while streptomycin was taken. Thiamine and riboflavin excretion were not markedly affected, and the pyridoxine compounds were unaffected in the one subject tested in this respect. Biotin excretion was markedly decreased. The conversion of tryptophan to niacin compounds appeared to be unaffected by streptomycin, supporting the evidence that the main conversion of the substance to the acid takes place in the body rather than in the intestine.

NUTRITION

Vol. 6, Summer, 1952

Nomenclature of the vitamins. V. H. Cheldenin.—p. 9.

* Teaching mothers infant feeding before their babies are born. A. Gunn.—p. 21.

* Diet and toxaemia of pregnancy. G. G. Lennon.—p. 25.

Antenatal Instruction. The decrease in infant mortality in Scotland, England, and Wales is a heartening thing to those working with the welfare of mothers and babies, but there is still a great need for developing antenatal teaching and making it more widely available. Health departments with antenatal clinics are emphasizing the value of nutrition education for the mother and of breast feeding for the baby. Preparation for successful breast feeding is taught, as well as proper diet during pregnancy and lactation. Artificial feeding is touched on but not stressed.

Nutrition and Toxemia of Pregnancy. Evidence exists that many complications of pregnancy, including toxemia, are more common in cases of nutritional deficiency than in instances where the mother has a good or adequate diet. The normal nutritional requirements in pregnancy and the reasons for them are discussed. Contrary to previous custom, there seems to be no physical basis for treating toxemia by starvation or for prescribing a protein-free diet because of rise in blood pressure. Although no close or direct connection between dietary deficiency and toxemia of pregnancy has yet been demonstrated, experimental evidence pointing to a relationship is reviewed.

NUTRITION REVIEWS

Vol. 10, June, 1952

Early experiences with vitamin A—a retrospect. E. V. McCollum.—p. 161.

*Experimental potassium depletion in man.—p. 163.

Uric acid and creatine metabolism in man.—p. 165.

Thyroid uptake of iodine in goiter.—p. 167.

*The dietary treatment of atherosclerosis in man.—p. 168.

*Cortisone and ACTH in nontropical sprue.—p. 169.

*Influence of nonprotein calories on protein metabolism.—p. 172.

Metabolism of dietary cholesterol by the liver.—p. 174.

Body composition.—p. 181.

Vitamin needs during reproduction.—p. 188.

Loss of lysine during bread baking.—p. 192.

Experimental Potassium Depletion. A control study of two normal subjects depleted of potassium without an associated depletion of water and other electrolytes showed that many of the clinical signs and symptoms commonly ascribed to hypokaliemia did not appear. It is felt the period of low potassium intake along with excessive losses must be prolonged before muscular weakness and the other symptoms appear.

Dietary Treatment of Atherosclerosis. One hundred patients with coronary atherosclerosis were observed for three years. They were divided into two groups with the controls being allowed to eat *ad libitum* an "average American diet" which was estimated to contain between 80 and 160 gm. fat and 200 to 1800 mg. cholesterol per day. The experimental group was given a diet with 25 gm. fat, 50 to 75 mg. cholesterol, and not over 1500 calories per day. Results in this small treated group suggest a beneficial effect upon morbidity and mortality. However, the influence of weight loss which occurred, was not discussed.

Cortisone and ACTH in Nontropical Sprue. A number of studies now indicate that temporary remissions in refractory cases of nontropical sprue are

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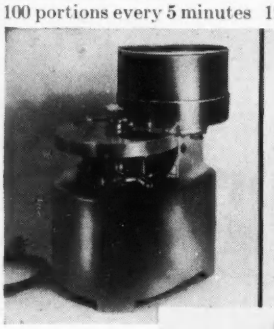

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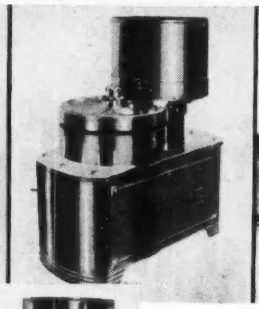

Model 4 A
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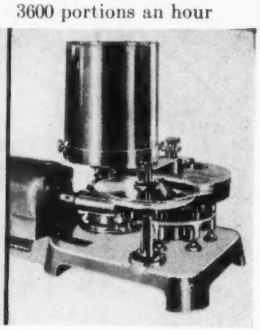

Model D A
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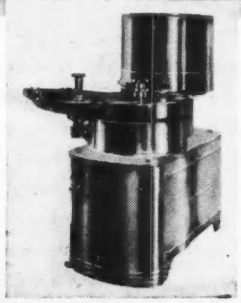

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obtainable with the use of ACTH or cortisone. Strength and appetite return along with a reduction in the number of stools and volume of the feces. Although not a cure, these agents offer a practical method of handling acute exacerbations in patients with steatorrhea, provided the value of low-fat, high-protein diets plus folacin, vitamin B_{12}, crude liver, calcium, and potassium supplements are not overlooked.

Influence of Nonprotein Calories. Many of the difficulties in interpreting nitrogen balance studies result from a lack of knowledge about (a) the *variability* of protein metabolism and (b) the *special roles* of the nonprotein foodstuffs over and beyond their roles as sources of energy. Nitrogen balances vary with time and tend to drift towards equilibrium until stores are depleted or repleted, depending on the caloric and nitrogen intakes. Specific amino acids—methionine, for example—also play a role. It is postulated that dietary and body nitrogen meet in a common pool and when the methionine in the diet is not enough to meet the subjects' (dogs were used in this experiment) special need, the body protein is "raided" for the necessary methionine with waste of many of the other associated protein constituents. Carbohydrate is more than just a source of energy; as precursor of pyruvate it plays an essential part in metabolism. Failure to appreciate this dual role of carbohydrate has resulted in some rather extraordinary statements about the relative protein-sparing capabilities of carbohydrate and fat. Fat, for example, cannot substitute for carbohydrate operatively as well as caloric-ally, but fat does spare protein by virtue of the caloric properties if essential quantities of carbohydrate are given. Another study has demonstrated that oral fat emulsions used as caloric supplements do spare protein in human subjects.

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PUBLIC HEALTH NURSING

Vol. 44, July, 1952

*Our state considers its food habits. M. B. Barry. —p. 403.

Study of Food Habits. Public health nurses in Rhode Island conducted a survey designed to indicate whether there are definite racial food customs in the state, if the people eat fairly well, if there is a definite lack in the diet, and if nutritional teaching has been effective. It was found that racial customs in eating are followed to a certain extent and interchanged among different groups. On the average, Rhode Islanders were found to eat fairly well, although many individuals fall far below recommended allowances. It was found that greater use of milk and of foods rich in ascorbic acid should be encouraged, although on the whole the educational program seems to have been worth while in improving food habits.

QUARTERLY BULLETIN OF NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Vol. 26, Summer, 1952

*Riboflavin and the cornea. O. E. Gordon.—p. 120.

Riboflavin and the Cornea. In clinical patients symptoms of conjunctivitis, lacrimation, burning, and failing vision have been reported to be relieved in some instances by riboflavin and in others by carotene. Signs of riboflavin deficiency have also seemed to be manifest in the cornea. In an attempt to gain some conclusive evidence of the relationship between the deficiency and the eye conditions, an experiment was conducted at Elgin State Hospital where diet could be controlled. Fifteen patients were employed as controls and fifteen were given a riboflavin-deficient diet. After one year and three months no changes in the limbal blood vessels or corneal vascularity were observed.

AMERICAN RESTAURANT MAGAZINE

Vol. 36, July, 1952

*Simplified portion control of 58 best sellers. G. L. Wenzel.—p. 46.

Portion Control. One per cent net profit, according to the most recent nation-wide survey, is the figure for the average restaurant. This is direct evidence that few managers and even chefs know the simple answer to food cost control—exact knowledge of the number of portions and their cost, obtained from each meat cut. This, the second of twelve articles, shows that these figures can be known exactly by buying prefabricated meats. Figures are given on

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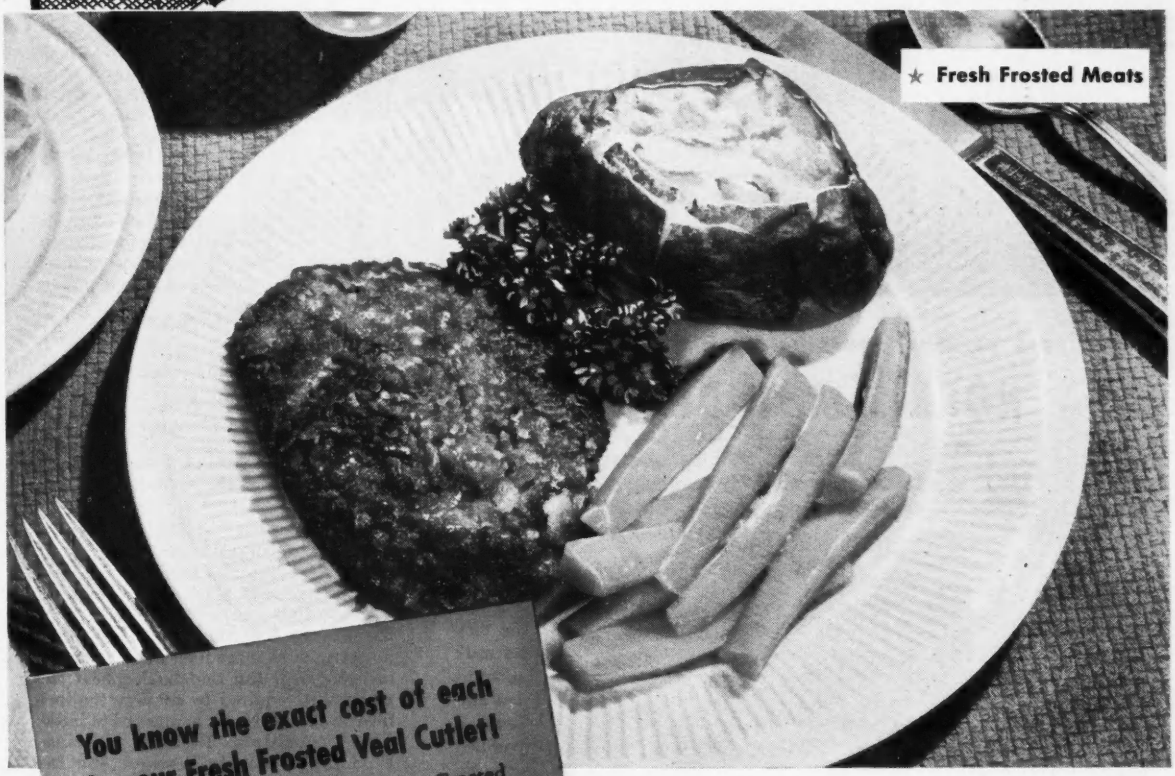

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COLLEGE AND UNIVERSITY BUSINESS

Vol. 13, June, 1952

*Increasing efficiency and morale through work simplification. M. L. Smull.—p. 30.

Vol. 13, July, 1952

*What are fringe benefits costing you? D. E. Dickason.—p. 28.

*Some changes in square cafeteria service. S. Wilson.—p. 30.

Work Simplification. Big kitchens which require many employees, man-hours, and motions, need work simplification for efficiency. A "travelgram," showing the distance and direction traveled during a work operation, is one device which can be used to gain employee interest and cooperation. Illustrations of two "travelgrams" and procedures to use in developing such a diagram are included. Other work simplification aids are: designing of new or redesigning of old equipment, and application of time and motion principles to simple repetitive tasks.

Fringe Benefits. "Fringe" benefits for employees may be grouped under two headings: (a) those which cost no extra money but which represent subtractions from full-schedule production (such as vacations, rest periods, holidays, and leaves for various purposes); and (b) those for which actual extra cash is paid outside of salaries and wages (such as pensions, insurance, extended disability payments, and meals and housing furnished at cost). In this article a theoretical institution is given a "trial run." Statistics show that one employee working one year for $3000 a year on a 40-hr.-a-week basis actually produces only an average of 34⅓ hr.; thus the institution loses 14.4 per cent in time. In addition to the annual salary, the institution pays in cash over and above salary for other benefits an amount of 7 per cent. Therefore, the actual cost in *money per hour* amounts to 25 per cent over the hourly figures on the payroll records. Few campus personnel and business managers know how much their "extras" cost and how much they mean to employees, according to a recent survey. Emphasis on publicizing these costs to campus employees is urged, so that the benefits will be appreciated.

Square Cafeteria Service. Square cafeteria service, widely recommended as an efficient method of serving lunch, has not been so highly regarded at night when meals are larger and speed is unimportant. By making certain parts of the square portable, the campus cafeteria of the University of California, Berkeley, has adapted the layout so that the fast square may be used at noon and the more leisurely conventional "line" service in the evening. Cashiering has been incorporated in the square itself. Diagrams appear, showing the arrangements for both lunch and dinner service.

FOOD ENGINEERING

Vol. 24, June, 1952

Anti-bacterial cement gives longer lasting floors. D. Levowitz.—p. 57.

*Better food for Navy. A. C. Avery.—p. 61.

*How nutrients are lost in processing and handling foods. B. L. Oser.—p. 62.

*Photo-spurred sanitation. R. E. Chivers.—p. 64.

Meat packer produces beef "cocktail." N. Draudt.—p. 67.

Improving Navy Meals. Modern detection, fire-control, and other equipment are adding new problems for naval commissary food researchers. Space for storage, food preparation, and dining has always been at a premium; now, however, even more food must be placed in less space, and the cooking heat and manpower required to convert the food into an acceptable form must be reduced. The Commissary Research Division, U. S. Naval Supply Research and Development Facility is looking for new food items with seven advantages: conservation of space, reduction of labor, reduction of cooking heat, elimination of waste, easy "cook-ability" for inexperienced cooks, reduction of storage and shipping losses, and greater acceptability. Recent years have brought a dozen important developments which seem to promise solutions to some of these problems: better quality dehydrated vegetables and fruits, stabilized dried eggs, frozen eggs, dried whipping cream, frozen juice concentrates, premixed bakery products, prefabricated meats, frozen vegetables and fruits, canned meats of improved quality, canned cheese mixtures, precooked frozen meats, and concentrated milks. How-

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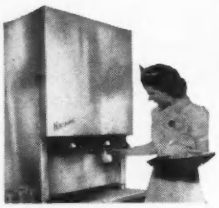

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* *Postgrad. Med. 9:106, 1951.*

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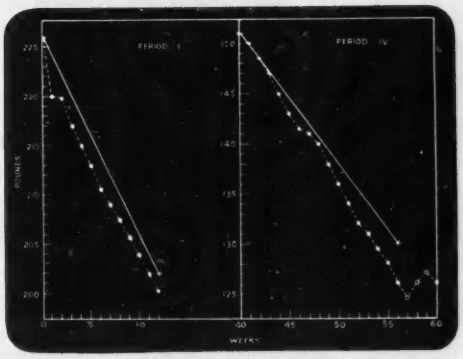

CHART OF WEIGHT LOSS
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ever, some of these need to overcome prejudices stemming from their inferior "ancestor" products in World War II.

Nutrient Losses in Processing. Vitamins are not the only nutritional components of foods which can deteriorate or be lost in cooking—nor is cooking the only way they may be destroyed. The author presents a check list of nutrients with processing and handling factors which affect them. These factors are: water, air, heat, time, light, acidity, microorganisms, and enzymic and nonenzymic reactions. Individual nutrients and their solubility and destructibility are briefly discussed.

"Candids" Improve Sanitation. Ugly but effective "candid" shots of poor housekeeping in a Florida bakery shocked its employees into better sanitation. Photographs, some of which accompany the article, were placed on bulletin boards throughout the plant. This practice, now pleasingly difficult to continue, supplemented intensive employee education in the bakery's sanitation program. The program consists not only of maintaining cleanliness in the processing equipment and buildings, but also of reducing insect life to a minimum and extermination of rodents. Voluntary, state, and county plant inspections also take place regularly, and products are analyzed for filth.

HOSPITALS

Vol. 26, July, 1952

*Checking garbage for pointers on unnecessary food waste.—p. 100.

Garbage Reveals Food Waste. Garbage inspection discloses three clues relating to food waste: *what* food is wasted, *how much*, and *why*. There are two kinds of food waste: edible and inedible. Excessive edible waste may mean that the particular food was not accepted by most patients or that it is served too often. It may also mean that the servings were too large. The fault could also lie in the preparation, either through a second-rate ingredient or through carelessness in measuring, mixing, or cooking. Standardized recipes will take care of the second difficulty to a reasonable extent. Studies show that the average total edible waste should not exceed 9 oz. per person per day, but with special attention it can be reduced to 3 oz. Inedible waste can also be avoided to some extent. Garbage inspections can uncover wasteful peeling of root vegetables or outer leaves of celery and lettuce unnecessarily discarded.

INSTITUTIONS MAGAZINE

Vol. 31, July, 1952

*Good napery adds welcome fillip to table's pleasures.—p. 1.

*Reduce meat costs by proper carving of fresh, smoked hams.—p. 2.

*Tight controls cut losses in food operation. D. E. Lundberg and C. V. Kane.—p. 2.

*Plan to make employees feel integral part of organization.—p. 2.

*Sanitarians explore teaching methods in group seminar.—p. 4.

Napery. Napery fabrics and styles are discussed. Table linens, together with laundering, often become a major expense in institutions' food service departments. Inconsiderate diners who abuse napery are hard to deal with, but institution employees can be effectively warned against using table linens for miscellaneous wiping and mopping or for handling hot cooking utensils. Other care of napery is discussed: protection against tearing and stains, "rest" periods, proper storage, and a specific seven-step washing formula. Stain removal is discussed, and two formulas are given for removers for "unknown" stains.

Carving Hams. Smoked and fresh hams can be attractive, diversified, and economical if proper cutting and cooking are done. The method discussed here consists of pre-cutting the ham to obtain various sections which can be cooked in different ways, thus obtaining maximum effective use of all parts of the ham. A diagram shows bone structure and the location of cuts, and photographs illustrate the carving procedure and finished cuts. How the cost can be calculated is pointed out, as is the calculation of cooking time. Yield is greater with this method, as a use for every part of the ham, including fat and bones, is calculated before any cooking is done and many parts of the ham are used that would otherwise be discarded.

Aids to Portion Control. Uniformity of portion sizes is helped by following the seven suggestions in this article. They include: sharp knives for cutting; guides for pie and cake cutting; allowing hot foods to "jell" before cutting; wrapped crackers and sugar; checking coffee

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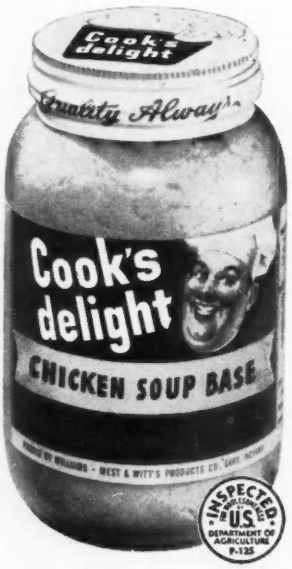

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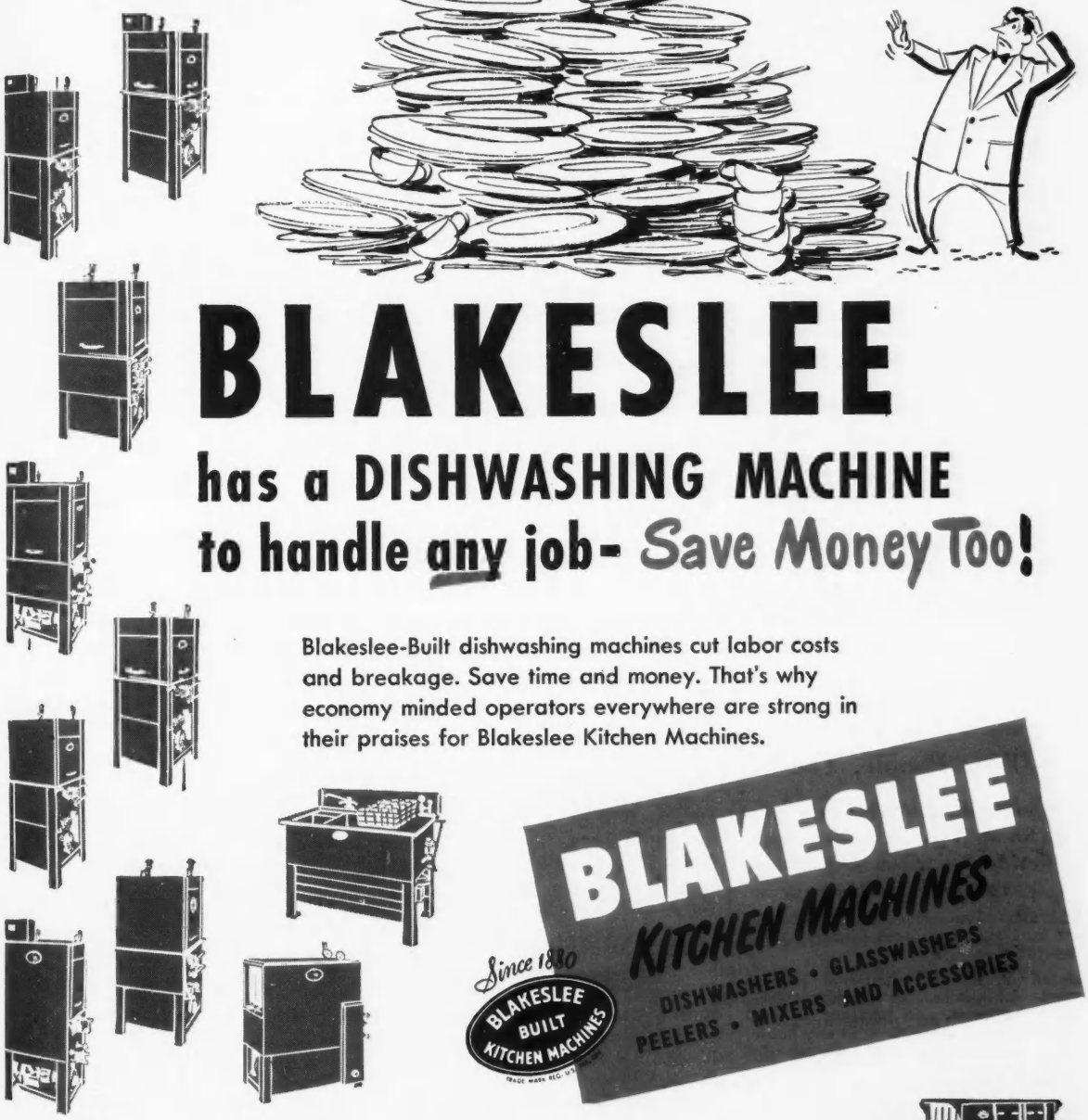

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cream dispensers; instructing food checkers in proper portion sizes; and using ice cream dippers where possible. Ounce scales are a "must" for use in preportioning, and every meat which can be scaled and refrigerated should be preportioned. Other features discussed are: how roasting temperatures for minimum shrinkage of meat; cutting deep-fat frying costs; left-overs; and employee meals.

Employee "Team Play." Employees of a large baking concern are considered vital factors in the company's success or failure. A large part of a new employee's first day is devoted to orientation. The actual training follows the program of (a) telling how it's done and why; (b) showing; (c) having the worker do it himself; and (d) checking and correcting. This indoctrination program, when first instituted, caused older employees to complain that some of the new people knew more than they did. As a result, a refresher or "King for a Day" program for more experienced employees was begun. As an added courtesy, the employee's wife or husband is included in the late afternoon part of the program which often includes dinner. Accent in both programs is on making the employee feel that he belongs.

Teaching Sanitation. "Building Better Sanitation" was the title of an in-service seminar for sanitarians held in Ohio recently. The objectives were (a) to develop understanding of educational techniques and their application and (b) to promote the integration of these techniques into every sanitation activity. The seminar included a panel on the sociologic aspects of sanitation; a discussion of readable writing on sanitation; an analysis of the spoken word by the head of a university speech department; material covering audio-visual aids and group dynamics, and suggestions for self-inspection by industry

New Appointments, Veterans Administration

The following hospital appointments of dietitians, not previously announced, have been made by the Veterans Administration.

Name	Position	Location
	Boston Area	
Hilda Frank (Reappointment)	Staff Dietitian	Northport, N. Y.
Eleanor Hruby	Staff Dietitian	Brooklyn, N. Y.
Althea E. Marshall	Staff Dietitian	Montrose, N. Y.
Marion J. Ross	Staff Dietitian	Rutland Heights, Mass.
Barbara Wolfe	Staff Dietitian	Framingham, Mass.
	Washington, D. C. Area	
Paquita Haddock (Reappointment)	Staff Dietitian	San Juan, P. R.
Jean M. Pope	Staff Dietitian	Wilkes-Barre, Pa.
Alice M. Sullivan	Staff Dietitian	Louisville, Ky.
Rita M. Webb	Head Dietitian	Butler, Pa.
	Atlanta Area	
Mary C. Bickerstaff	Staff Dietitian	Columbia, S. C.
Irene B. Blankenship	Staff Dietitian	Kennedy, Memphis
Blanche A. Cheatham	Staff Dietitian	Tuscaloosa, Ala.
S. Virginia Crawford	Staff Dietitian	Fayetteville, N. C.
Dorothy B. Irby	Staff Dietitian	Kennedy, Memphis
Dorothy B. Lane	Staff Dietitian	Mountain Home, Tenn.
Nancy Thompson Slepow	Staff Dietitian	Coral Gables, Fla.
Doris J. Webb	Staff Dietitian	Chamblee, Ga.
Rubye J. Williams	Staff Dietitian	Memphis, Tenn.
	St. Louis Area	
Russie P. Anderson (Reappointment)	Assistant Chief Dietitian	McKinney, Tex.
Virginia C. McBride	Staff Dietitian	Houston, Tex.
Ruth E. Maxwell	Head Dietitian	Poplar Bluff, Mo.
Mary L. Miller	Head Dietitian	Poplar Bluff, Mo.
Rosemary S. Sargent	Staff Dietitian	Alexandria, La.
Vivian E. Trevor	Staff Dietitian	McKinney, Tex.
Charlyn Triplett	Staff Dietitian	Kerrville, Tex.
	Fort Snelling, Minnesota Area	
Elizabeth J. Emmons	Head Dietitian	Iowa City, Iowa
Mary A. Leaser	Head Dietitian	Ft. Custer, Mich.
Marjorie A. Lindle	Staff Dietitian	Madison, Wis.
Avis J. Lynn	Staff Dietitian	Hines, Ill.
Ruth J. Radai	Staff Dietitian	Wood, Wis.
	San Francisco Area	
Jo Beth Johnson Adamson	Staff Dietitian	Salt Lake City, Utah
Charlotte F. Bartels	Staff Dietitian	Livermore, Calif.
LaVerl Chestnut	Staff Dietitian	Fresno, Calif.
Kathryn M. Eremia	Staff Dietitian	San Francisco, Calif.
Beverly Grow (Reappointment)	Staff Dietitian	Vancouver, Wash.
Harriet T. Lane	Head Dietitian	Palo Alto, Calif.
Marie E. Middaugh	Staff Dietitian	Walla Walla, Wash.

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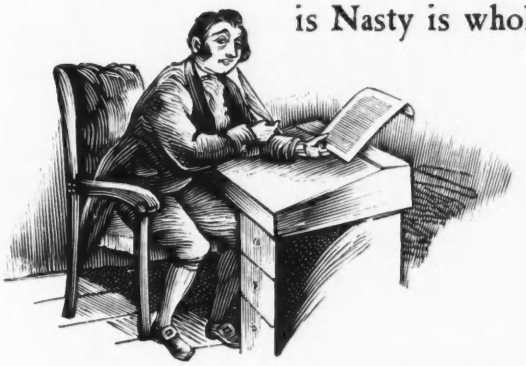
"This is by no means so difficult a task as some gloomy philosophers [uninitiated in Culinary Science] have tried to make the world believe—who seem to have delighted in persuading you, that every thing that is Nice must be noxious;—and that every thing that is Nasty is wholesome."



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News Notes

Curriculum Fellowship Awarded. The recipient of the A.D.A. Curriculum Fellowship for 1952 will be Marjorie L. White of Cincinnati. Miss White is a graduate of Kansas State College, Manhattan. She has also taken additional work at the University of Wisconsin and completed her dietetic internship at Christ Hospital, Cincinnati. Since finishing her internship, she has been employed at Children's Hospital, Cincinnati, having served in various capacities, the most recent being as Temporary Head Dietitian.

As the Fellowship holder, Miss White will work at Iowa State College, Ames, continuing the curriculum study for dietetic interns which was started by The American Dietetic Association several years ago under the guidance of Dr. Hilda Taba. Further work was done during a summer workshop at Iowa State College by R. Alberta Hughes, Beatrice Finkelstein, and Jeanne Weiss. Miss White will work toward a master's degree in foods and nutrition, with a minor in education.

FAO Publication. *World War Against Want—The Work of FAO 1950–51* has recently been released by the Food and Agriculture organization. It is a reprint of the Director-General's yearly progress report prepared for the Sixth Session of the FAO Conference, held in Rome last November and December. The booklet deals with FAO "in the field" and highlights the practical assistance designed to raise nutritional levels and living standards in member countries by the increased production of food and forestry products. Asia and the Far East, the Near East and Africa, Latin America, and Europe are discussed, with each section subdivided into regional and country projects and programs. The booklet closes with a discussion of worldwide projects and programs, and lists FAO publications for 1950–51.

WHO News. World Health Organization activities during 1951 have been summarized in the Annual Report of the Director-General, published in the May issue of the *Chronicle* of WHO. Nutritional activities of the organization, both alone and in collaboration with FAO, include studies and surveys of kwashiorkor, endemic goiter, infant feeding, and the nutritional status of the people in various countries such as Iraq, Lebanon, and Syria. Other activities include: aid to the Institute of Nutrition of Central America and Panama in Guatemala, so that it may become a training center; continued support in a program for the further development of the Nutrition Institute in Zagreb, Yugoslavia; and provision of the services of a hospital dietitian to make a survey and train personnel in Ceylon, and of a medical nutritionist and a biochemist for aid in continuing and extending the activities of the Nutrition Institute in Djakarta, Indonesia. WHO is also cosponsoring with FAO a nutrition course in India, a survey preliminary to development of a nutrition program in Thailand, and lectures and conferences on nutritional problems in Austria.

Seminar on Mental Health and Infant Development. Bishop Otter College, Chichester, England, was the scene of a Seminar on Mental Health and Infant Development held from July 19 to August 10 under the sponsorship of the World Federation for Mental Health. Organizations assisting were: the World Health Organization, UNESCO, the International Children's Centre of Paris, the U. S. National Advisory Mental Health Council, and the Grant Foundation of New York. Participants from thirty countries attended. The Seminar was based on clinical studies of the development of children made in France, the United Kingdom, and the United States under the general direction, respectively, of: Dr. Jenny Roudinesco, psychiatrist, Les Hôpitaux de Paris; Professor D. R. MacCalman, psychiatrist, University of Leeds; and Dr. Margaret Mead, anthropologist, American Museum of Natural History.

U.S.P.H.S. Program on Aging. To demonstrate to state and local health departments how they can meet the health needs of older people, a hygiene of aging program is being established under the Division of Chronic Disease and Tuberculosis of the U. S. Public Health Service. The purpose of the program will be to advise health departments on the development of activities in this area. Dr. Cletus L. Krag will direct the program.

Government Publications. *United States Civil Defense Emergency Welfare Services* has recently been published as AG-12-1 by the Federal Civil Defense Administration. This manual is a guide for state civil defense directors and an aid for others concerned with civil defense and mass care and welfare. It is based on accumulated experience in civil defense during World War II, particularly that of the British, Germans, and Japanese. The section on emergency feeding is presented in outline form, with sections on "The Need," "Planning," "Local Staffing," "Emergency Feeding Committee," "Food Teams," and "Coordination with Other Groups." An organization chart for the local group is presented, and a sample printed form for surveying feeding facilities is shown. The manual may be obtained from the Government Printing Office, Washington 25, for 20 cents.

The U. S. Public Health Service has issued a fifteen-page mimeographed report on "Wartime Disaster Planning—Hospital Dietary Department." In it, an outline for the over-all plan of operation is given, followed by a detailed explanation. Simple, one-dish meals are listed and sample menus for the first three days of emergency are presented. Sanitary precautions are emphasized, and one section deals with the problems of infant feeding. A chart is presented to aid in organizing personnel and duties. Copies of this report are available from the Dietetic Branch, Division of Hospitals, U. S. Public Health Service, Washington 25.

Hospital Services: Dietary Department Plans, Equipment, and Supplies has been released by the Division of Hospital Facilities, U. S. Public Health Service. The booklet contains a reprint of "Cooperative Planning of Dietary Services for 50-, 100-, and 200-Bed Hospitals" which appeared simultaneously in this JOURNAL and in *Hospitals* in November 1951. A second section presents "Suggested Equipment and Supply Lists for Dietary Services in 50, 100, and 200-Bed General Hospitals," as prepared by the Division of Hospital Facilities, which appeared in *Hospitals*.

Palatability and Nutritive Value of Home-Canned Chicken is the title of a new U.S.D.A. bulletin. Prepared by Gladys L. Gilpin, Elsie H. Dawson, Edward W. Toepfer, and Helen W. Warren, all of the Bureau of Human Nutrition and Home Economics, the bulletin discusses studies on palatability and thiamine retention made on home-canned chicken prepared by different methods. It also contains a comprehensive appendix which gives details of the experimental procedure. The booklet, U.S.D.A. Technical Bulletin No. 1054, may be obtained from the Government Printing Office for 15 cents.

The popular set of nutrition charts prepared by the U.S.D.A.'s Bureau of Human Nutrition and Home Economics is again available, with minor revisions, after being out of print for a short time. The ten charts for nutrition teaching are based on laboratory studies using white rats to show importance of good nutrition on growth and development. Sold as a complete set only, the yellow, black, and white charts can be bought from the Government Printing Office, Washington 25, D. C., for $1 a set.

The Calcium Content of Commercial White Bread has recently been released by the U. S. Department of Agriculture as Technical Bulletin No. 1055. The bulletin was prepared by Verz R. Goddard and Mary W. Marshall, nutrition specialists of the Bureau of Human Nutrition and Home Economics. In it are shown the results of analysis for calcium of 402 samples of commercial white

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bread from 41 states and the District of Columbia. Since baking practices have changed considerably in recent years, up-to-date information on calcium in bread was sought. Conclusions reached were that (a) consumers and diet planners cannot depend on bread for a definite quantity of calcium unless the label indicates the amount or the bread has been baked to specifications; (b) white bread eaten at the city dweller's average weekly rate of one and a half pound loaves can supply as much as 16 per cent or as little as 1 per cent of calcium needs; and (c) breads sampled in the survey owed on the average about a third of their calcium content to milk. The remainder was supplied by such sources as dough conditioners, substances used as yeast foods, and "extra calcium" added for enrichment—a practice permitted by law but not widely used. Calcium, the authors note, is a nutrient often short in U. S. diets, particularly those of city families. This report may be obtained from the Government Printing Office for 10 cents.

A list of films which relate to all aspects of childhood has been prepared by the Children's Bureau, to answer requests for such information from the general public and professional people who work with children. Entitled "Motion Pictures on Child Life," the list includes more than 450 films on the social, medical, mental, and developmental aspects of child life. Each film is briefly described, but no attempt has been made to evaluate the individual films. They are grouped around such headings as adolescence, child care, child development, juvenile delinquency, mental health, nutrition, and so on. Copies are available at the Government Printing Office, Washington 25, for 40 cents.

Plentiful Foods. The U.S.D.A. lists the following foods as expected to be plentiful during September:

Fruits and vegetables

Beans, snap
Cabbage
Grapes
Lettuce
Peaches
Pears, Bartlett
Tomatoes

Protein foods

Buttermilk
Cheese, cottage
Fish, fresh and frozen
Hens, stewing
Milk—nonfat dry solids
Turkeys

Other foods

Fats, table and cooking, including lard
Honey
Peanut butter
Shortening, vegetable

Meetings. The 122nd national meeting of the *American Chemical Society* will be held in Atlantic City, September 14 through 19.

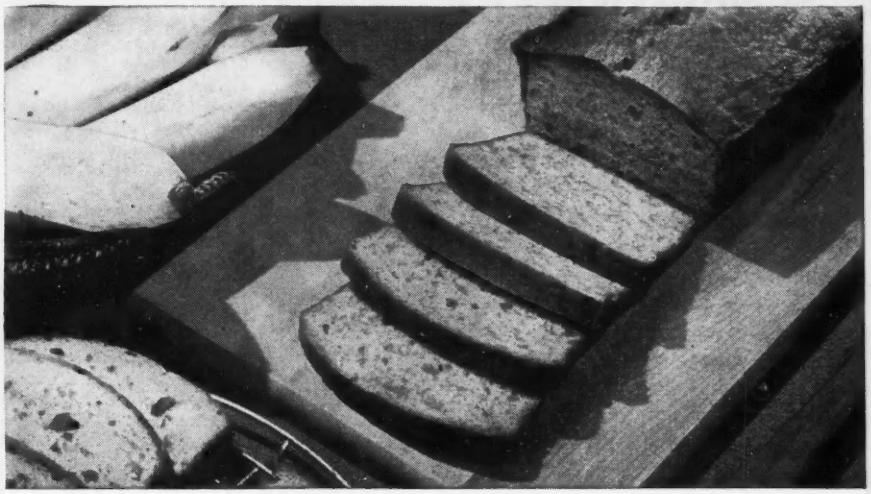
The *American Hospital Association* will meet in Philadelphia, September 15 through 18.

October 20 through 24 are the dates of the annual meeting of the *American Public Health Association* to be held in Cleveland.

The *American School Food Service Association* will hold its annual convention in Los Angeles, November 11 through 13.

CHIQUITA BANANA SAYS:

Starred For Popularity
Banana Tea Bread



BANANA TEA BREAD

Scaling weight for 1 loaf: (30 ¼-inch slices) 1 pound 10 ounces	2 loaves (60 ¼-inch slices) 3 pound 4 ounce mixture		8 loaves (240 ¼-inch slices) 13 pound 1 ounce mixture	
INGREDIENTS	WEIGHTS OR MEASURES		WEIGHTS OR MEASURES	
Flour, sifted	14 oz.	3½ cups	3 lbs. 8 oz.	3½ quarts
Baking powder	½ oz.	4 teaspoons	2 oz.	5 tablespoons
Baking soda		½ teaspoon	½ oz.	1 tablespoon
Salt		1 teaspoon	½ oz.	1 tablespoon
Ripe bananas,* peeled	1 lb.	4 to 5, medium-sized	4 lbs.	16 to 18, medium-sized
Shortening	5½ oz.	⅔ cup	1 lb. 6 oz.	2¾ cups
Sugar	11 oz.	1⅓ cups	2 lbs. 6 oz.	4¾ cups
Eggs	6½ oz.	4 to 5 (½ pint)	1 lb. 10 oz.	16 to 18 (1¾ pints)
VARIATIONS				
BANANA RAISIN TEA BREAD				
Raisins, seedless	10 oz.	2 cups	2 lbs. 8 oz.	2 quarts
BANANA NUT TEA BREAD				
Nuts, broken	4 oz.	1 cup	1 lb.	1 quart

Use either fully ripe or all-yellow bananas

Sift together, flour, baking powder, baking soda and salt. Place bananas into mixer bowl and beat at medium speed until they are thoroughly mashed. Then add shortening, sugar and eggs and continue beating at medium speed for 1 minute. Add flour mixture and continue beating at low speed for about 30 seconds or until well-blended. DO NOT OVERBEAT. Scrape down bowl and beater once or twice. Turn into greased loaf pans (8½ x 4½ x 3 inches) and bake in a moderate oven (350° F.) about 1 hour 10 minutes, or until bread is done. For variations, add specified ingredient to flour mixture and proceed as above.

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Banana Bread
makes delicious
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Bananas keep
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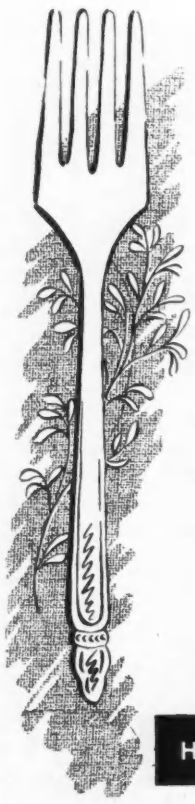
Nutritious sandwiches!
This fresh fruit bread with
jelly, jams, cream cheese, or
peanut butter... good!

Best for baking—
fully ripe bananas...
yellow peel flecked
with brown



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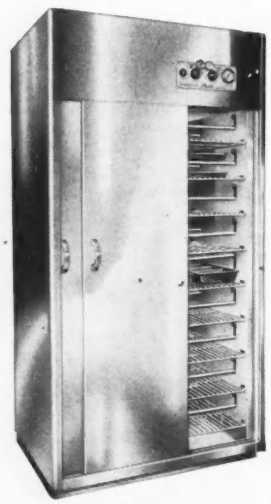

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Milbank Memorial Fund Publication. "An Experiment in Diet Education during Pregnancy" is the title of a recently published report by the Milbank Memorial Fund of a study conducted at Morrisania City Hospital, Bronx, New York, from 1948 to 1950. The report, prepared by Katharine Berry and Dorothy G. Wiehl, appeared in the *Milbank Memorial Fund Quarterly* for April, 1952. Results of the study, undertaken at the request of the Bronx Nutrition Committee of the Welfare and Health Council of New York City, support previous evidence that prenatal diet affects the course and outcome of pregnancy, and that individual instruction can improve the diet of the low-income prenatal patient. The report may be ordered from the Milbank Memorial Fund, 40 Wall Street, New York 5.

Milk Consumption. Although milk production in the U. S. has increased little in the last decade, the population has increased by more than twenty million. Production of milk per person is now about 730 lb. a year compared to a 1935–39 average of 820 lb. However, milk is being used more efficiently today for human food—often in different forms. People are using more whole fluid milk and whole milk products, such as ice cream, canned milk, and cheese. Great advances have been made in using the part of the milk below the cream line. Large quantities of skim milk, formerly fed to farm animals or wasted, are now being used in nonfat dry milk, skim milk drinks, and cottage cheese. Americans now use for food approximately 70 per cent of the nonfat milk solids compared to only 50 per cent in the 1920's and early 1930's. Consumption of practically all milk products, except butter, is higher today than before World War II.

Interns Graduate. Twelve dietetic interns completed their courses at the *VA Hospital, Bronx, New York*, on June 30. The graduates are: Doris M. Asmus, Mary H. Coles, Esther L. Featro, M. Joan Geisler, Alice J. Jenkins, Bernice Levine, Ruth D. McShane, Theresa Mikitish, Audrey F. Naley, Gertrude A. Stanko, Edna Strand, and Edith Waller.

Interns comprising the class of 1952 at *Saint Marys Hospital*, Rochester, Minnesota, are: Georgette Baltus, Bertie Bujnoch, Mary Lou Colebank, Mary Demyan, Sally Dudack, Maureen Griffin, Rose Marie Grommesh, Martha Hartnell, Donna Huun, Rose Kitzman, Betty Kustner, Flora Lunn, Mary McBride, Mary Ann Meis, Mary Harriet Reid, Rosalia Roth, Sister Agnes Anne, Sister Catherine Regina, Sister Jane Frances, Sister Mary Leo, Joan Toren, Clara Trindle, and Rosemary White. Miss Bujnoch, at a dietary staff meeting on July 12, was named outstanding member of the class, and awarded a trip to the 35th Annual A.D.A. Meeting in Minneapolis.

Graduation exercises at the *VA Hospital, Hines, Illinois*, were held on July 12 for eleven dietetic interns. Fern W. Gleiser, University of Chicago School

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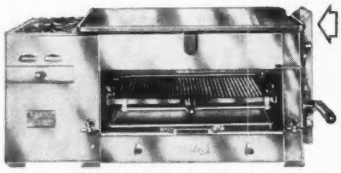

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of Business, addressed the group on "Your Future as a Dietitian." Members of the class are: Wilma L. Alderfer, Joan Brill, Dolores Dattilo, Kathryn Fenelon, Margaret A. Hirth, Mary E. Jaeger, Lina McCann, Mary J. McCrocklin, Rita M. Meyer, Leonore Neumann, and Serafina J. Traficanti.

Capt. Frolich Speaks at Workshop. Work simplification was the topic chosen by Capt. Louise A. K. Frolich, Chief, Training Branch, Food Service Division, Walter Reed Army Medical Center, at the 13th Annual Food Service Manager's Workshop at the University of Alabama. Capt. Frolich addressed eighty Alabama school lunch managers, emphasizing three different phases of the subject: "Analysis of Work Distribution Among Employees," "Making Your Job Easier," and "Rearrangement of Standard Equipment for More Efficient Use."

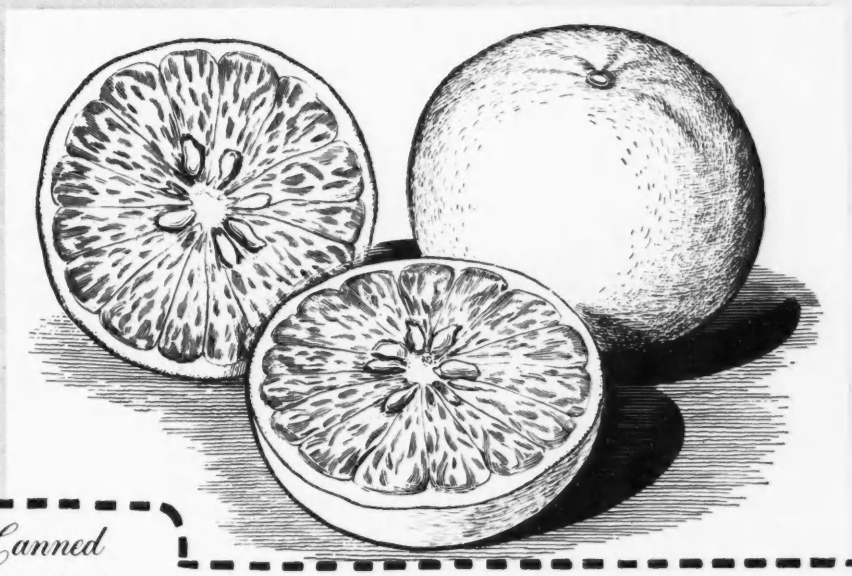
U.S.P.H.S. Appointment. Dr. James R. Shaw, it was announced July 28, has been appointed Chief, Division of Hospitals, U. S. Public Health Service. Formerly Medical Officer in Charge, U.S.P.H.S. Hospital, Detroit, Dr. Shaw succeeds Dr. G. Halsey Hunt who was recently named Associate Chief, Bureau of Medical Services.

Air Force Promotions. Four dietitians have recently been promoted by the WMSC of the Air Force. Kathleen R. Creech, Langley AFB, Virginia, and Frances M. Horr, 495th Medical Group, Wiesbaden, Germany, were promoted to the grade of major, and Julia R. Moynihan, Burtonwood RAF Station, England, and Jean K. Smith, Lackland AFB, Texas, received captain's bars.

New Ways with Apples. Quantity recipes using apple products are being released by the Processed Apples Institute as a part of its institutional program. The Institute was established in 1951 to increase consumer interest in and appreciation of apple products. It has developed recipes as a result of considerable consumer and institutional research. After research had been done, the Institute undertook actual development and quantity testing of the recipes, which included taste and preference tests. The first set of recipes, released in July, employs canned apple slices, prepared apple sauce, and apple juice in a variety of dishes. All recipes will be based on a low food and labor cost, and almost all are for year-round service with a few hot-weather specialties. Depending on the individual dish, they are for 50 to 100 portions, and are printed on 4 × 6 in cards. All make use of the #10 can institutional packs of apple sauce and 46-oz. containers of apple juice. The quantity recipes are available from the Processed Apples Institute, Inc., 30 East 40th Street, New York 16.

Frances Swenson. Word has been received in the A.D.A. office of the sudden death of Frances Swenson on July 28 in Youngstown, Ohio. Miss Swenson, an A.D.A. member since 1930 and a life member since 1944, was Chief Dieti-

For your food file—interesting facts on canned grapefruit juice



Canned Grapefruit Juice

Nutritive Values of 6 fluid oz. (186 grams) Serving

Nutrient	Quantity of Nutrient Per Serving	Approximate Percentage of Daily Recommended Allowance*	Approximate Percentage of Minimum Daily Requirement**
Carbohydrate (available) (1)	19 gm.	—	—
Fat (1)	0.26 gm.	—	—
Protein (1)	0.9 gm.	1	—
Caloric Value (1)	83 calories	3	—
Calcium (1)	15 mg.	2	2
Phosphorus (1)	24 mg.	—	3
Iron (1)	0.74 mg.	6	7
Vitamin A (2, 6)	31 I. U.	1	1
Thiamine (3, 6)	0.052 mg.	4	5
Riboflavin (4, 5)	0.032 mg.	2	2
Niacin (3, 5)	0.32 mg.	2	—
Vitamin C (2, 6)	62 mg.	83	207

*Percentage based on Recommended Daily Allowance for physically active man—National Research Council. **Percentage based on Minimum Daily Requirement for adult over 12 years of age—Food and Drug Administration.

1. Food Research 11, 391 (1946)
2. J. Nutrition 28, 107 (1944)
3. J. Nutrition 28, 117 (1944)
4. J. Nutrition 28, 123 (1944)
5. J. Am. Dietet. Assoc. 21, 357 (1945)
6. J. Am. Dietet. Assoc. 23, 226 (1947)

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General Research Laboratory, American Can Co., Maywood, Illinois

If you would like free file cards bearing similar information on *Mushrooms*, *Salmon*, *Asparagus*, *Pimentos*, and *Baked Beans*, write to:

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Maywood, Illinois

The Seal of Acceptance denotes that this advertisement has been reviewed by the Council on Foods and Nutrition of the American Medical Association and has been accepted by them.

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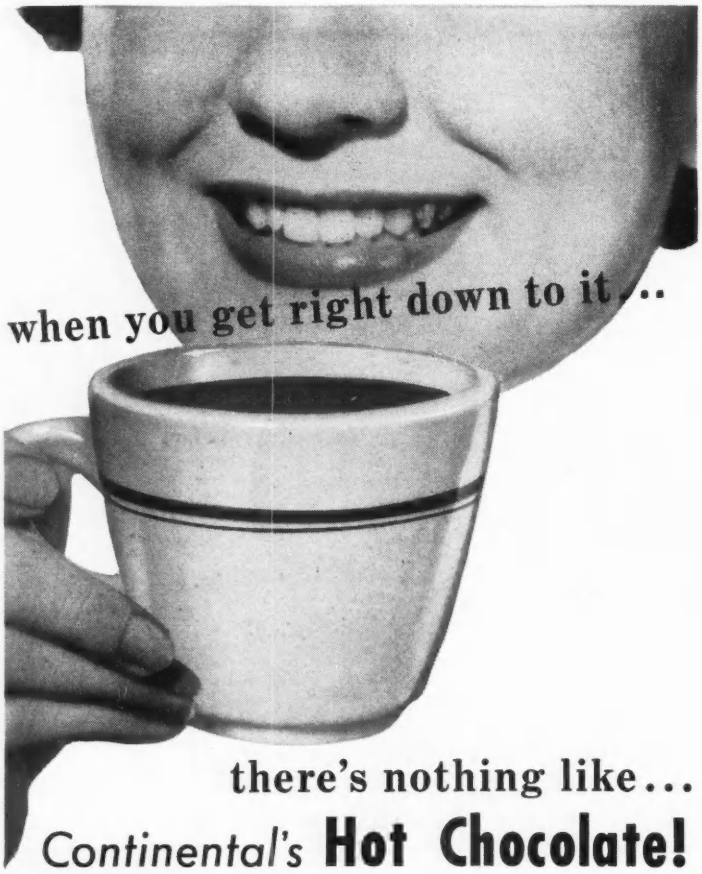

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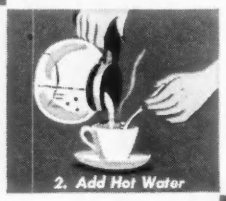
HERE'S WHY—Dutch process cocoas and *whole milk* make Continental's sweet milk cocoa heavier bodied, richer flavored. Finely granulated pure cane sugar means fast dissolving and no lumping. These and other pure ingredients create a hot chocolate drink with a distinctively superior chocolate flavor. Your Continental Man is featuring this tempting "76" product during August and September. Let him show you how to add magic to your menu at *lower cost* to you!

Continental's "76" Hot Chocolate drink brings extra business! Each quick-opening envelope contains 1⅛ oz. of rich, delicious more chocolaty flavor. Try it!



FREE SAMPLES
Continental Hot Chocolate is featured during August and September. Write for free samples. Address Constance Conover, Continental Coffee Company, 375 W. Ontario St., Chicago 90, Illinois, Dept. I-5

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"FLAVOR TESTED" MENU PRODUCTS
CONTINENTAL COFFEE COMPANY
CHICAGO • TOLEDO • BROOKLYN
Producers of Continental Coffee
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tian at Elizabeth Steel Magee Hospital in Pittsburgh. At the time of her death, Miss Swenson was serving as Chairman of the A.D.A. Placement Bureau Board. She had also been active in section project work of the Association and the Pennsylvania Dietetic Association, having been its President in 1947–48.

Restaurant Management Course. "Planning for Profits in 1953" is the title of the Eighth Short Course, sponsored by the University of Chicago School of Business' Restaurant Management Program. The course is being held on the University campus September 15 through 17.

New Flavor Combinations for Low-Sodium Diets. From a recent questionnaire sent out by the Diet Therapy Section of the Washington State Dietetic Association, the following helpful hints in low-sodium cookery were compiled:

Asparagus with garlic sautéed in olive oil.

Green beans with almonds or with parsley and mushrooms, or served cold with onions and green peppers.

Peas with mint.

Red cabbage with vinegar and caraway seeds.

Corn with peppers or with pimiento and onions.

Cucumbers sautéed in olive oil with basil.

Brussels sprouts with chestnuts.

Roast pork with thyme.

Chicken or fish with curry.

Chicken salad with pineapple and toasted almonds, or with apples and walnuts.

News of State Associations

California Dietetic Association. The *Bay Section* of the California Dietetic Association held its June meeting in San Francisco. Madame Savoray, Manager-Owner of Ramor Oaks Restaurant, San Francisco, addressed the group on "Food Experiences in the Philippines During the Japanese Invasion." Officers for 1952–53 were announced at this meeting: Chairman, Virginia McMasters, University of California Campus Cafeteria, Berkeley; Vice-Chairman, Sylvia Roletto Mitchell, Herrick Memorial Hospital, Berkeley; and Secretary-Treasurer, Dorothy Johnson, St. Luke's Hospital, San Francisco.

Hawaii Dietetic Association. Honolulu was the site of the Hawaii Dietetic Association's annual meeting on June 30. Mrs. E. B. Black spoke on "Women in Our Community." Election of officers was also held.

The Professional Education Committee of the Hawaii association sponsored the May meeting at Queen's Hospital, Honolulu. Boletha Frojen, University of Hawaii, led a panel discussion on "Internship—A Look Forward and a Look Backward," in which local dietitians took part. Junior and senior students in dietetics and institutional management at the University of Hawaii were guests.

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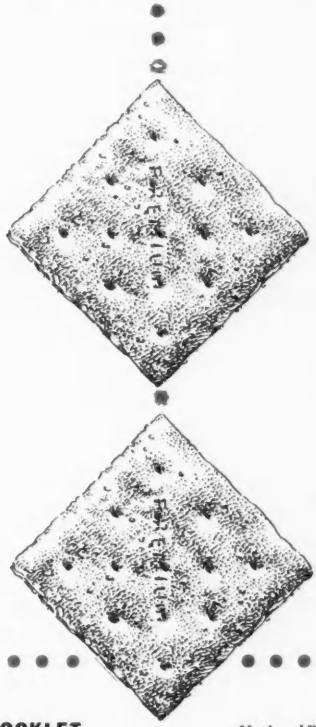
with NABISCO Individual Servings...

PREMIUM SALTINE CRACKERS*

... in moistureproof cellophane packets

- Each package contains the right-sized portion for the average serving of soup...chowder...salads
- Thrifty substitute for bread and rolls
- Easier to handle...no waste of time in handling unused crackers and trying to keep them fresh

**SNOWFLAKE SALTINE CRACKERS in the Pacific States*



- Less breakage...no waste of bottom-of-the-box pieces
- Fresher...no waste caused by staleness or sogginess
- Better taste...these tempting salty, flaky PREMIUM Saltine Crackers are always crisp and oven-fresh

Everybody knows the name "NABISCO"... Bakers of quality products that are synonymous with good things to eat.

SEND FOR THIS FREE BOOKLET packed with ideas on how to increase sales and cut food cost with NABISCO products including: *PREMIUM Saltine Crackers • TRISCUIT Wafers • RITZ Crackers • DANDY OYSTER Crackers • OREO Creme Sandwich* ®

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Kindly send your booklet "Around the Clock with NABISCO."

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Organization.....

Address.....

City..... State.....

Officers for 1952–53 of the Hawaii Dietetic Association, all of Honolulu, are as follows: President, Ruth Toreson, Queen's Hospital; President-Elect, Shizuko Higano, Kuakini General Hospital; Secretary, Elaine Ching Lau, Kuakini General Hospital; and Treasurer, Ella Bodal, Children's Hospital. Section chairmen are: Community Nutrition, Mary Sherrill Maertens, Service Cold Storage, Honolulu; Diet Therapy, Fujino Nikaido, Honolulu, and Violet Tanabe Hiranaka, Queen's Hospital, Honolulu; Food Administration, Marjorie Jorgensen, University of Hawaii Cafeteria, Honolulu; and Professional Education, Boletha Frojen, University of Hawaii, Honolulu.

Louisiana Dietetic Association. The *New Orleans Dietetic Association* on June 30 put on a half-hour television show, which was paid for by a local dairy as a civic educational gesture. The program explained dietitians' duties and included a "plug" for recruitment. As guests of the program, twenty dignitaries of New Orleans in the fields of medicine, nursing, and dietetics were present. Eight of the nine large hospitals in the city were represented as well as guests from the fields of foods and nutrition.

Pennsylvania Dietetic Association. The Pennsylvania Dietetic Association and The Hospital Association of Pennsylvania co-sponsored an Institute on Dietetics held at The Pennsylvania State College, June 29 to July 2. Several Pennsylvania dietitians took part in the program.

The *Lehigh Valley Dietetic Association* met at Allentown General Hospital in March to hear Mrs. Talmadge, Professor at Cedarcrest College, report on her recent trip through Greece. In April the group met at Sacred Heart Hospital in Allentown and were shown the film "Dishwashing Dividends." Dr. Dominic Antonio Donio escorted the members through the hospital's Department of Physical Medicine, explaining the uses of the different types of equipment. The following officers were elected for 1952–53 at this meeting: President, Ardella Erhardt; Vice-President, Mary-Louise Peters; Secretary, Jean Lebo; and Treasurer, Slava Malec, Bethlehem.

Newly elected officers of the *Pittsburgh Dietetic Association* for 1952–53 are: President, Marguerite Vesely; President-Elect, Ruth Friel, St. Francis Hospital; Secretary, Doris Iba Korol, University of Pennsylvania School of Nursing; and Treasurers, Florence Golomb Fralin, Visiting Nurse Association of Allegheny County, and Ruth Reuning, Shadyside Hospital, Pittsburgh.

South Carolina Dietetic Association. Jacqueline Kinard is the South Carolina Dietetic Association's choice for recipient of their scholarship grant for 1952. This grant, founded in 1950 "to assist a student who is planning to enter an approved training course for dietetic interns," consists of $50 and is awarded annually to an institutional management graduate of Winthrop College, Rock Hill. Miss Kinard begins training this month as a dietetic intern at Duke University Hospital.

Washington State Dietetic Association. Members of the *Seattle Dietetic Association* in April were entertained by Mrs. Thomas Balmer who presented a demonstration of floral arrangements. The group met in May to hear Hazel Smith discuss "Herbs and Their Uses." New President for 1952–53, elected at the April meeting, is Beth Gannon, University of Washington Child Health Center.

The *Spokane Dietetic Association's* last meeting of the year, held in May, included the election of officers for 1952–53. They are: President, Rayleen Haller Merman, Washington State Dairy Council; Secretary, Mable Rydholm, Deaconess Hospital; and Treasurer, Esther Wilson, Sacred Heart Hospital.

Convention Notes

Reservations. Attention is called to the form to be used in securing hotel reservations, in the July JOURNAL and each succeeding issue. Hotel Radisson will be the headquarters. The Housing Bureau has informed us that the number of single rooms is limited, and recommends sharing a room.

The tentative program is found on pages 830, 832, and 834 in this issue.

Conferences. Four one o'clock conferences are planned daily throughout

Have you tried the LIQUID form of

Sucaryl®

(Cyclamate, Abbott)

Non-Caloric Sweetener for Sugar-Restricted Diets

*stable in cooking

*no bitter aftertaste

SPRINKLE SUCARYL Sweetening Solution on fruits and berries . . . add it to milk before pouring over cereal . . . use it to sweeten iced beverages, where tablets dissolve slowly . . . use it for faster, easier blending in many recipes. SUCARYL adds absolutely no calories, keeps its sugar-like sweetness in cooking, baking, canning and freezing. No bitter aftertaste in ordinary use. SUCARYL Sweetening Solution is available at drug stores in either sodium or calcium form, in 4-fluidounce bottles; SUCARYL Sodium Tablets, in bottles of 100 and 1000. In planning sugar-restricted diets, use both forms.

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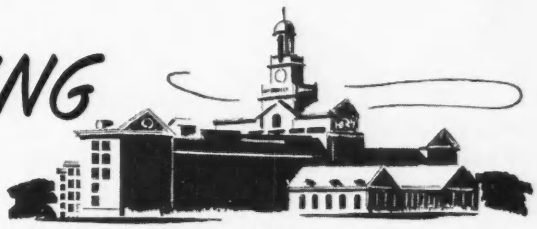
Send for free copies of "Calorie Saving Recipes"—32-page booklet of kitchen-tested recipes that cut calories 23 to 89 percent by using non-caloric SUCARYL in place of sugar. Drop a card, stating the number of copies that you desire, to Abbott Laboratories, North Chicago, Illinois.

Some GAS COOKING FACTS *from* MONT ALTO SANATORIUM *which emphasize*

★ **SIMPLICITY OF EQUIPMENT**

★ **CONTROLLABILITY**

★ **DEPENDABILITY**



Food Service is a major operating problem at this mountain-top sanatorium with its 1300 beds plus 600 staff members. Of course, the kitchens are all equipped with efficient Gas Cooking Appliances and the hospital's bakery operates a revolving, automatic Gas Oven.

At remotely located Mont Alto, Miss Mikkalsen the Head Dietician, schedules all cooking within an 8-hour day, permitting the chefs to commute from their distant homes. In this daily routing Miss Mikkalsen and the staff naturally rely upon modern Gas Cooking Equipment for these important reasons:

★ ***simplicity***—permits on-the-job training of new personnel and keeps maintenance within a minimum of expense and man-hours.

★ ***controllability***—The instant on-or-off action of Gas with no warming-up and cooling-off periods; the accurate control of temperature so essential in the retention of moisture and flavor in roasting; the speed of blue-flame Gas in broiling and range-top cooking.

★ ***dependability***—essential in locations like Mont Alto where remoteness adds expense and time to service calls —Gas and Modern Gas Cooking Equipment prove unfailingly reliable.

Specified for the original buildings, Gas, of course, has been chosen also for every new facility added. Today there are 3 main kitchens and 6 diet kitchens as well as accessory Gas Cooking facilities at Mont Alto. These are only some of the facts. For full information on modern Gas Cooking consult your Gas Company or your kitchen equipment specialist.

Gas roasting retains moisture and flavor

Gas frying is fast

Gas baking assures uniform texture and color

MORE AND MORE... THE TREND IS TO GAS FOR COMMERCIAL BAKING

AMERICAN GAS ASSOCIATION, 420 LEXINGTON AVE., NEW YORK 17, N. Y.

the convention. Attendance will be limited to seventy-five persons. Since the same programs will be repeated each day, you will want to attend but once.

Get-Togethers. An event new to A.D.A. conventions will take place Monday evening, October 20, from 7:00 to 8:15 p.m. Rooms at the Radisson Hotel will be assigned as meeting places for members with common interests. Dietitians from small hospitals will meet in one room while those from large hospitals will meet in another. College food service members will also have an opportunity to meet as a group, as will college instructors. Another meeting room will be assigned to public health nutritionists. Each of you will have an opportunity to meet others in your field, and you will be free to come and go as you like. These informal gatherings will be followed by the state officers' meeting at 8:30 p.m., which you are invited to attend.

News of Advertisers and Exhibitors

Cereal Institute, Inc., is again conducting a contest on Better Breakfast Projects this fall in an effort to interest teachers and their students in organizing a school and community program of activities to improve breakfast-eating habits. The projects are to be carried out during September which is Better Breakfast Month, and the reports of the project must reach Cereal Institute, Inc., not later than October 31. A project may be planned by home economists and home economics classes in any junior or senior high school within the U. S. Awards range from $100 down to $10. Complete information is available from Cereal Institute on request.

"A Resumé of the Findings of the Iowa Breakfast Studies" has been published by *Cereal Institute*. It is based on six papers by Drs. Kate Daum, W. W. Tuttle, and others, of the State University of Iowa, five of which appeared in this JOURNAL during 1949, 1950, and 1951. The studies were undertaken (a) to learn the effects of skimping and skipping breakfast and (b) to determine the optimal size of breakfast.

Cereal Institute has also published a 44-page booklet by Elmo Roper titled *A Study of the Teaching of Nutrition in the Public Schools*. The publication is the result of personal interviews early in 1951 with school superintendents, principals, and teachers in one hundred localities in the U. S. It is divided into six sections: "A Brief Discussion of the Study," "How the Study Was Conducted," "Importance Placed on Nutrition Teaching," "Educators' Opinion of Students' Nutrition Habits," "Extent of Nutrition Teaching," and "Distribution of 'School Progressions.'" Among findings in the booklet are these: (a) over three-fourths of the school officials regard students' skipping or slighting of breakfast as a serious matter; (b) 95 per cent of principals believed that every student should have some classroom instruction in nutrition before leaving the school; and (c) educators (most of whom have had some formal training in nutrition) generally agree that nutrition teaching should start in kindergarten or first grade.

A new, smaller Foley Silver Washer and Drier, Model A-3, has recently been announced by the *Foley-Irish Corporation*. This model, rated at a capacity of 900 pieces of silver per hour, has been specifically designed for medium- and small-sized feeding operations which would not require the larger Foley models. Model A-3 is a removable drum type, with electrical requirements such that no special line is necessary for operating it. Its 31-in. height permits under-counter installation. This model is completely automatic and goes through its entire washing-rinsing-drying cycle with electrically heated forced air at 200°F.

H. J. Heinz Company has published a new booklet, "Magic Onions—Prize Recipes" containing twenty recipes using Magic Onions as well as general instructions for using this dehydrated product. Soups, meat and fish dishes, meat accompaniments, egg and cheese dishes, vegetables, salads and salad dressings, and sauces and relishes are included in this collection. Selected from over five hundred entries in the Heinz Magic Onion contest, all the recipes listed have been tested in the Heinz Food Service Center. Most are for approximately fifty portions.

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★ WASTE
★ LOST FLAVOR
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STEAM COOKERS
Old-fashioned stove-top cooking is out of place in the modern kitchen. Save valuable time. Stop cooking vegetables to death in pots and pans. Put a Market Forge Steam Pressure Cooker to work in your kitchen and cut cooking time 50% . . . reduce shrinkage 20% . . . serve fresher, more nutritious vegetables and meats. Steam cooking eliminates burning . . . retains more flavor, more natural color . . . ends "cooking fatigue". Locks in precious vitamins . . . no loss of nutrition in boiling away.
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Market Forge Steam-It Available for Direct Steam or Gas Operation.
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Market Forge Company
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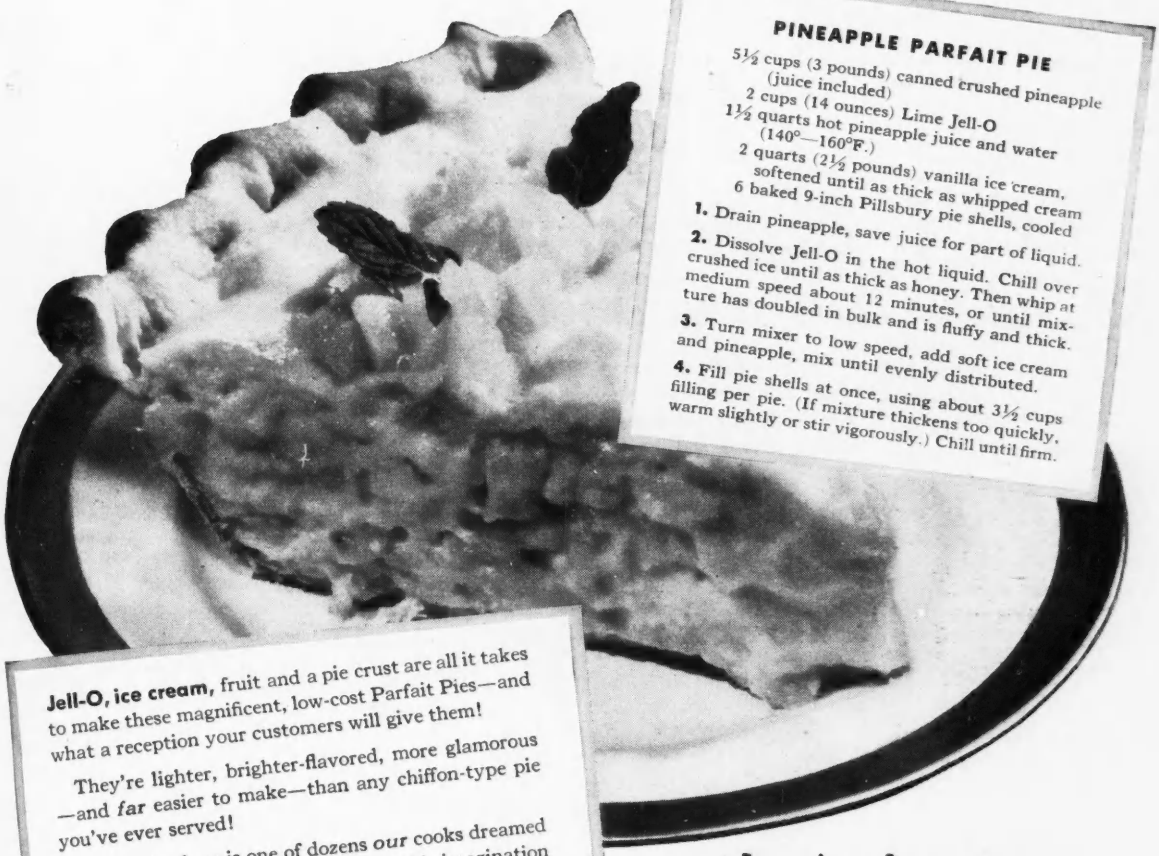
Here's the most exciting pie idea in 50 years!

Ann Pillsbury's brand-new Parfait Pie!



PINEAPPLE PARFAIT PIE

5½ cups (3 pounds) canned crushed pineapple (juice included)
2 cups (14 ounces) Lime Jell-O
1½ quarts hot pineapple juice and water (140°—160°F.)
2 quarts (2½ pounds) vanilla ice cream, softened until as thick as whipped cream
6 baked 9-inch Pillsbury pie shells, cooled

1. Drain pineapple, save juice for part of liquid.
2. Dissolve Jell-O in the hot liquid. Chill over crushed ice until as thick as honey. Then whip at medium speed about 12 minutes, or until mixture has doubled in bulk and is fluffy and thick.
3. Turn mixer to low speed, add soft ice cream and pineapple, mix until evenly distributed.
4. Fill pie shells at once, using about 3½ cups filling per pie. (If mixture thickens too quickly, warm slightly or stir vigorously.) Chill until firm.

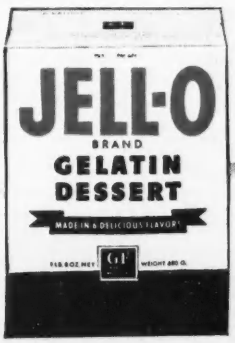
Jell-O, ice cream, fruit and a pie crust are all it takes to make these magnificent, low-cost Parfait Pies—and what a reception your customers will give them!

They're lighter, brighter-flavored, more glamorous —and *far* easier to make—than any chiffon-type pie you've ever served!

The recipe here is one of dozens *our* cooks dreamed up—and when your pastry chef lets *his* imagination go, the result may very well be a pie combination that you'll want to feature as a specialty.

Incidentally, thanks to the help of a national advertising campaign that runs in 13 magazines, 5 radio shows and 5 television shows—many of your customers already know and are clamoring for genuine Parfait Pies—guaranteed only when made with Jell-O gelatin.

Be among the first to serve these delicious desserts!



Now's the time for Parfait Pies!

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FREE OFFER! Fill in this coupon and send today for your free copy of General Foods' quantity recipe folder with Parfait Pie recipes—one more dazzling than the next!

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The *Louisiana Sweet Potato Commission* has published a new recipe pamphlet titled "Forty Ways to Serve Louisiana Golden Yams." Suggestions include uses for yams as vegetables accompanying the main course and in desserts, as well as four pages of helpful general hints and history of the plant. The booklet is available for 25 cents.

A new "Granite Gray" silicone base finish highlights the new line of Garland restaurant ranges of the *Detroit-Michigan Stove Company*. The new finish is one of ten new features and improvements in the new line. Other improvements include sturdier legs with a new adjustable height feature and specially designed heavy-duty oven heat control. Valve panel, oven racks, and manifold have all been rearranged for greater convenience and utility. Automatic lighting for both oven and griddle burners is also available as an extra.

S. Blickman, Inc., has put on the market a new all-purpose electrically-heated food conveyor, designed to handle all three feeding requirements in hospitals: selective menus, ward service, and special diets. This conveyor, made of stainless steel, contains units each of which is provided with eighteen square and rectangular top-deck insets in different sizes. These can be arranged to accommodate foods according to the needs of individual menus. There are also two round wells for soups and other liquid foods, and two heated drawers and an ample storage compartment.

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For 180° Rinse

Your choice of electric, gas or steam booster can be built right into Universal Dishwashing Machines. Meets Health Authority requirements. Requires no extra plumbing. Saves installation cost.

Your choice of SWING WASH
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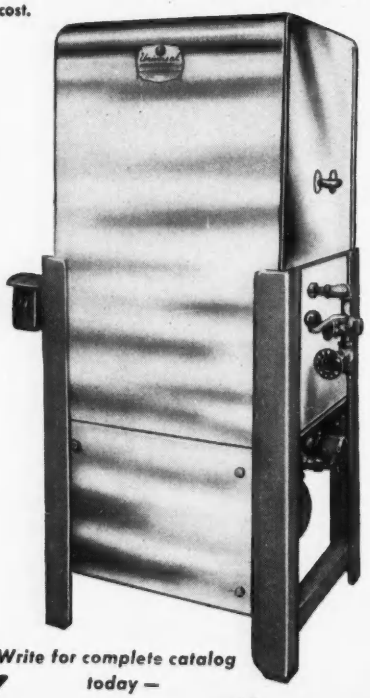
You get the BEST water pattern for your washing job.



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You Pay No More—But You Get More Value When You Install a UNIVERSAL COMMERCIAL TYPE DISHWASHING MACHINE

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COMMERCIAL TYPE UNIVERSAL DISHWASHERS

50 WINDSOR PLACE, NUTLEY 10, NEW JERSEY

"World's Largest Exclusive Producer of Dish, Glass and Silver Washing Machines"

Continental Coffee Company has announced that six new quantity recipes for entrée dishes are now available. The recipes, printed on 4 × 6 in. cards and featuring Continental "76" Menu Products, include: tuna chip casserole, Welsh rarebit, Spanish rice, butterfly fried shrimp, tasty beef wheels, and tomato aspic. They are designed for both twenty-five- and fifty-portion yields.

Swift & Company is introducing pasteurized, ready-to-feed, prepared powdered egg yolks for infants. The product will make available to mothers egg yolks at a cost less than that of an equivalent amount of fresh eggs, eliminating the waste of unused whites. No cooking is required. The yolks may be sprinkled on cereals, soups, and vegetables. The small cans of this product contain the equivalent of five yolks and can be stored covered in a refrigerator.

The *Pillsbury Home Service Center* announces a new addition to its group of mixes—Pillsbury Angel Food Cake Mix. This mix is being introduced region by region as production increases and larger quantities are available.

The *Salvajor Company's* new WasteXit Model "MA" Food Waste Dispenser, designed to fit the needs of institutions having medium or substantial volumes of food waste, is said to eliminate the need for refrigerated garbage rooms. This self-contained unit bolts to the floor and drain connection can be made on either side. It is adaptable to any table 35 in. high (table not included). Waste is discharged as a flowing liquid and capacity is said to exceed the equivalent of the contents of seven 30-gal. garbage cans—a disposal rate of 1500 lb. per hour.

The Institution Food Service Department of *General Foods Corporation* has announced the development of more than a dozen recipes for the new ice cream parfait pie in quantities to produce six 9-in. pies. The new parfait pie is now being promoted cooperatively by General Foods, Pillsbury Mills, Inc., and ice cream manufacturers' associations. The filling for the pie can also be served in sundae glasses, sherbets, and other types of institution dessert dishes.

General Foods Corporation has also announced that a new process to eliminate separation is being used in preparing Birds Eye frozen orange juice concentrate. With the new process, the enzymic action which causes separation is eliminated, and the new Birds Eye orange juice may be reconstituted and refrigerated for as long as 72 hr. without separation or loss of vitamin content and flavor.

"Prize Dairy Dishes" is a new recipe collection released by *National Dairy Council*. The first three pages contain: tips on protecting milk, butter, cheese, and ice cream; a buying guide for dairy foods based on yields; and proportions and uses for cream sauces. Recipes are given for soups, entrées, vegetable dishes, salads, desserts, beverages, and party dishes—many with special appeal to the teen-ager. The bottom of each page gives either menus, ideas for serving, or suggestions for garnishes, toppings, or flavorings.